

From: 73476 Pak, Michael
Sent: Friday, February 18, 2005 12:24 AM
To: STIC-Biotech/ChemLib
Subject: 09/673,133 sequence search

Sequence search - 2 month amendment.
App. #: 09/673,133
Result format: Paper.
Title: transferrin binding protein moraxella.

Please search:

Search commercial and interference databases.

SEQ ID NO: 2, 4, and 6 (all protein)

Top 40 hits.

Thanks,

Mike

2.00 - 706
4.1 - 712
6.00 - 713

Michael Pak
Art Unit 1646
Office: Remsen 4E75
Mailbox: Remsen 4C70
571-272-0879

STAFF USE ONLY

Searcher: _____
Searcher Phone: 2-_____
Date Searcher Picked up: _____
Date Completed: _____
Searcher Prep/Rev. Time: _____
Online Time: _____

Type of Search
NA Sequence: # _____
AA Sequence: # _____
Structure: # _____
Bibliographic: _____
Litigation: _____
Patent Family: _____
Other: _____

Vendors and cost where applicable
STN: _____
DIALOG: _____
QUESTEL/ORBIS: _____
LEXIS/NEXIS: _____
SEQUENCE SYSTEM: _____
WWW/Internet: _____
Other(Specify): _____

Date completed: _____

Searcher: Beverly e 2528

Terminal time: _____

Elapsed time: _____

CPU time: _____

Total time: _____

Number of Searches: _____

Number of Databases: _____

Search Site

_____ STIC

_____ CM-1

_____ Pre-S

Type of Search

_____ N.A. Sequence

_____ A.A. Sequence

_____ Structure

_____ Bibliographic

Vendors

_____ IG

_____ STN

_____ Dialog

_____ APS

_____ Geninfo

_____ SDC

_____ DARC/Questel

☒ Other CGN

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STIC Search Report

Biotech-Chem Library

STIC Database Tracking Number: 145514

To: Michael Pak
Location: rem/4e75/4c70
Art Unit: 1646
Thursday, February 24, 2005

Case Serial Number: 09/673133

From: Beverly Shears
Location: Remsen Bldg.
RM 1A54
Phone: 571-272-2528

beverly.shears@uspto.gov

Search Notes

Protein Sequence Searches – February 2005

All of the sequence databases on ABSS have recently been updated.

- Please note that the curators of the UniProt database have purged some temporary accession numbers from the most recent version of UniProt. These sequences have been assigned new permanent accession numbers. The new UniProt record may not contain the previous temporary accession number.
- If you encounter an accession number from an older search run against UniProt (results file extension .rup) that can no longer be found in the database, the permanent record with the new accession number can be found by searching the old accession number in the UniProt Protein Archive database (uniPARC) at:

<http://www.pir.uniprot.org/database/archive.shtml>

If you have any questions regarding this information or your results, please contact any STIC searcher.

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GenCore version 5.1.6
Copyright (c) 1993 - 2005 Compugen Ltd.

OM protein - protein search, using sw model

Run on: February 23, 2005, 20:07:47 ; Search time 26.0976 Seconds
(without alignments)
2039.451 Million cell updates/sec

Title: US-09-673-133-6

Perfect score: 3715

Sequence: 1 MKHPIITLCLVAISAVLLTA.....DTDDSKASVVGTKRQKEVK 713

Scoring table: BLOSUM62

Gapop 10.0 , Gapext 0.5

Searched: 513545 seqs, 74649064 residues

Total number of hits satisfying chosen parameters: 513545

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 45 summaries

Database : Issued Patents AA:

- 1: /cgm2_6/ptodata/1/iaa/5A_COMB.pap:*
- 2: /cgm2_6/ptodata/1/iaa/5B_COMB.pap:*
- 3: /cgm2_6/ptodata/1/iaa/6A_COMB.pap:*
- 4: /cgm2_6/ptodata/1/iaa/6B_COMB.pap:*
- 5: /cgm2_6/ptodata/1/iaa/PCTUS_COMB.pap:*
- 6: /cgm2_6/ptodata/1/iaa/backfiles1.pap:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	DB ID	Description
1	3715	100.0	713	4	US-09-059-584-53
2	2718.5	73.2	707	2	US-08-949-941B-2
3	2315	62.3	709	4	US-08-778-570B-15
4	2315	62.3	709	4	US-09-053-584-15
5	2246.5	60.5	706	4	US-09-059-584-46
6	2241.5	60.3	702	3	US-08-613-009A-9
7	2241.5	60.3	702	4	US-08-778-570B-11
8	2241.5	60.3	702	4	US-09-059-584-11
9	2237.5	60.2	702	2	US-08-867-941-25
10	2237.5	60.2	702	3	US-09-074-658-25
11	2218	59.7	689	4	US-08-778-570B-16
12	2218	59.7	689	4	US-09-059-584-16
13	2144.5	57.7	682	3	US-08-613-009A-10
14	2144.5	57.7	682	4	US-08-778-570B-12
15	2144.5	57.7	682	4	US-09-059-584-12
16	2140	57.6	713	4	US-09-059-584-49
17	1929	51.9	712	4	US-09-059-584-51
18	1599	43.0	416	4	US-09-540-236-2388
19	845.5	22.8	601	3	US-08-613-009A-20
20	845.5	22.8	601	4	US-08-778-570B-26
21	845.5	22.8	601	4	US-09-059-584-26
22	841.5	22.7	599	3	US-08-448-194-2
23	841.5	22.7	599	3	US-08-867-921-2
24	834	22.4	598	1	US-08-487-890A-97
25	834	22.4	598	2	US-08-478-435-97
26	834	22.4	598	2	US-08-337-483-97
27	834	22.4	598	2	US-08-478-435-97

28	834	22.4	598	3	US-08-474-671-97	Sequence 97, Appl
29	834	22.4	598	3	US-08-483-577A-97	Sequence 97, Appl
30	834	22.4	598	3	US-08-897-438-97	Sequence 97, Appl
31	834	22.4	598	3	US-08-637-654-97	Sequence 97, Appl
32	834	22.4	598	3	US-08-649-518-97	Sequence 97, Appl
33	828	22.3	578	3	US-08-448-194-61	Sequence 61, Appl
34	828	22.3	578	3	US-08-867-921-61	Sequence 61, Appl
35	824.5	22.2	579	1	US-08-064-174-1	Sequence 1, Appl
36	824.5	22.2	579	1	US-08-066-167-1	Sequence 1, Appl
37	824.5	22.2	579	1	US-08-449-733-1	Sequence 1, Appl
38	824	22.2	662	3	US-09-405-728-3	Sequence 3, Appl
39	791	21.3	593	1	US-07-961-522-4	Sequence 4, Appl
40	791	21.3	593	1	US-08-217-438-4	Sequence 4, Appl
41	791	21.3	593	1	US-08-217-438-5	Sequence 5, Appl
42	791	21.3	593	1	US-08-487-890A-100	Sequence 100, App
43	791	21.3	593	1	US-08-321-978-4	Sequence 4, Appl
44	791	21.3	593	2	US-08-710-584-4	Sequence 4, Appl
45	791	21.3	593	2	US-08-478-435-100	Sequence 100, App

ALIGNMENTS

RESULT 1
US-09-059-584-53
; Sequence 53, Application US/09059584
; Patent No. 6440701
; GENERAL INFORMATION:
; APPLICANT: Myers, Lisa E
; APPLICANT: Schryvers, Anthony B
; APPLICANT: Harkness, Robin E
; APPLICANT: Loosmore, Sheena M.
; APPLICANT: Du, Run-Pan
; APPLICANT: Yang, Yan-Ping
; APPLICANT: Klein, Michel H
; TITLE OF INVENTION: Transferrin Receptor Genes of Moraxella
; NUMBER OF SEQUENCES: 60
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Sim & McBurney
; STREET: 6th Floor, 330 University Avenue
; CITY: Toronto
; STATE: Ontario
; COUNTRY: Canada
; ZIP: M5G 1R7
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/09/059,584
; FILING DATE: 14-APR-1998
; CLASSIFICATION:
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/778,570
; FILING DATE: 03-JAN-1997
; CLASSIFICATION:
; ATTORNEY/AGENT INFORMATION:
; NAME: Stewart, Michael I
; REGISTRATION NUMBER: 24973
; REFERENCE/DOCKET NUMBER: 1038-794
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (416) 595-1155
; TELEFAX: (416) 595-1163
; INFORMATION FOR SEQ ID NO: 53:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 713 amino acids
; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear
US-09-059-584-53

Query Match 100.0%; Score 3715; DB 4; Length 713;

Qy 702 VVFGTKRQEVK 713
 Db 695 VVFGARKQEVK 706

RESULT 3

US-08-778-570B-15
 ; Sequence 15, Application US/08778570B
 ; Patent No. 6437096
 ; GENERAL INFORMATION:
 ; APPLICANT: Myers, Lisa E
 ; APPLICANT: Schryvers, Anthony B
 ; APPLICANT: Schryvers, Robin E
 ; APPLICANT: Loosmore, Sheena M.
 ; APPLICANT: Du, Run-Pan
 ; APPLICANT: Yang, Yan-Ping
 ; APPLICANT: Klein, Michel H
 ; TITLE OF INVENTION: Transferrin Receptor Genes of Moraxella
 ; NUMBER OF SEQUENCES: 43
 ; CORRESPONDENCE ADDRESS:
 ; ADDRESSEE: Sim & McBurney
 ; STREET: 6th Floor, 330 University Avenue
 ; CITY: Toronto
 ; STATE: Ontario
 ; COUNTRY: Canada
 ; ZIP: M5G 1R7
 ; COMPUTER READABLE FORM:
 ; MEDIUM TYPE: Floppy disk
 ; COMPUTER: IBM PC compatible
 ; OPERATING SYSTEM: PC-DOS/MS-DOS
 ; SOFTWARE: Patent in Release #1.0, Version #1.30
 ; APPLICATION NUMBER: US/08/778,570B
 ; FILING DATE: 03-JAN-1997
 ; CLASSIFICATION: 536
 ; ATTORNEY/AGENT INFORMATION:
 ; NAME: Stewart, Michael I
 ; REGISTRATION NUMBER: 24973
 ; REFERENCE/DOCKET NUMBER: 1038-664
 ; TELECOMMUNICATION INFORMATION:
 ; TELEPHONE: (416) 595-1155
 ; TELEFAX: (416) 595-1162
 ; INFORMATION FOR SEQ ID NO: 15:
 ; SEQUENCE CHARACTERISTICS:
 ; LENGTH: 709 amino acids
 ; TYPE: amino acid
 ; STRANDEDNESS: single
 ; TOPOLOGY: linear

US-08-778-570B-15
 Query Match 62.3%; Score 2315; DB 4; Length 709;
 Best Local Similarity 65.3%; Pred. No. 7,2e-150;
 Matches 480; Conservative 77; Mismatches 130; Indels 48; Gaps 15;
 Qy 1 MKHIPLTLCVAISAVLITACGG-SGGSNPAPPTIPNAGSAGNAGTGTTGGTGSTDNV 59
 Db 1 MKHIPLTLCVAISAVLITACGGSGGFPNPASTIPNAGSAGNAGNAGT----- 54
 Qy 60 GNAGSGTGNAGSNGNSGTGSANTPEPKYODVPTDKNEQVSSIOEPAMGYAMEL 119
 Db 55 ---GGANSAGNAGTGAGSAGSASTPEPKYKDVPTDENKAEVSGIQEPAMGYGVEL 111
 Qy 120 KLRNAHPLNPNKNEAEKRIALDDQDLVAVGDLTNIPFDKNLTLYLKKSSEVWSKFRQA 179
 Db 112 KLRNWP-----QEQEHAQINTNDVKLGGDLKXNPFDSIWNQIKNSKEVQTVYNQE 165
 Qy 180 KGGIEN-----NTRLTHKDLSEQKEAKVKSEALDNALTFQAEKYKELIENAHDKSDAR 234
 Db 166 KQIEDQIKRENKQRPDKLDDVLAQYIEVKVLDRLTELAKPIYEKYNINSHDKQNKAR 225
 Qy 235 NRDLVYKSGNYSYGYTATHDKKTNTYRGYALYYKGSSTAKELPOTSAYKYGYWDFM 294

Db 226 TRDLKYVRSGYIYRSGY-SNIIPKKIARTGFGALFYGGTQTAKQLPVSQVKYKGTWDFM 284
 Qy 295 TDAITDNKYITDLPGIARQTQWR-SLVSTDEYATLLTDKNKPSDYNGAYGHSSSEDFYNFA 353
 Db 285 TDAKKGQSFSGTSQRLAGDRYSAMSRYHEYPSSLTDEKKNPDNYNGEYGHSSSEFTVDFS 344
 Qy 354 DKIKGKLISNQLSG--TAVTAKERYKIEADIHGNRFRGSATASDKAEDSKTOHPFTSDA 411
 Db 345 KSLKGBELSSNIQDGHKGSVNVKTKYDIDANIYGNRFRGSATASDTTEASKSKHFFTSDA 404
 Qy 412 TNKLEGGFYGPKEELAGKFLTDNKLFGVFGAKRDK--VEKTEAILDAYALGTFTN---N 466
 Db 405 KNSLEGGFYGPNAEBELAGKFLTDNKLFGVFGAKRESEAKEKTEAILDAYALGTFTNPKGT 464
 Qy 467 -TNKATTTTPTTKOLDNFGNAKLVLGSTVNLVSTDATK--NEFTKFTKDKKTSATNK 524
 Db 465 TNPA--FTANSKKELDNFGNAKLVLGSTVIDLPTGATKDVNEF-----KEKPKSATNK 517
 Qy 525 AGETLMWYNDVIVKT--YGNFELYKFGELSVGSHSVFLOGERTATTGKAVPTTGKAK 582
 Db 518 AGETLMWYNDVIVKTYGYGRNFELYKFGELSIGGSHSVFLOGERTA---EKAVTEGTAK 574
 Qy 583 YLGNWVGVI-----TGAGTGSFNEAQAIDFIDFERKSVKGLTTOGRTDPVFNKGEI 638
 Db 575 YLGNWVGVIYTKDGTGTSTGKSFEAQAIDFIDFERKSVKGLTTOGRQDPVFNITQOI 634
 Qy 639 AGNWTGKASTTKADAGGYKIDSSSTGKSVIENAEVTTGGFYGNANEMGGSFTHDTHDS 698
 Db 635 AGNWTGTASTAKANVGGYKIDSSSTGKSVIENAKVTGGFYGNANEMGGSFTHDTHDS 694
 Qy 699 KASVVGTKRQEVK 713
 Db 695 KASVVGTKRQEVK 709

RESULT 4

US-09-059-584-15
 ; Sequence 15, Application US/09059584
 ; Patent No. 6440701
 ; GENERAL INFORMATION:
 ; APPLICANT: Myers, Lisa E
 ; APPLICANT: Schryvers, Anthony B
 ; APPLICANT: Harkness, Robin E
 ; APPLICANT: Loosmore, Sheena M.
 ; APPLICANT: Du, Run-Pan
 ; APPLICANT: Yang, Yan-Ping
 ; APPLICANT: Klein, Michel H
 ; TITLE OF INVENTION: Transferrin Receptor Genes of Moraxella
 ; NUMBER OF SEQUENCES: 60
 ; CORRESPONDENCE ADDRESS:
 ; ADDRESSEE: Sim & McBurney
 ; STREET: 6th Floor, 330 University Avenue
 ; CITY: Toronto
 ; STATE: Ontario
 ; COUNTRY: Canada
 ; ZIP: M5G 1R7
 ; COMPUTER READABLE FORM:
 ; MEDIUM TYPE: Floppy disk
 ; COMPUTER: IBM PC compatible
 ; OPERATING SYSTEM: PC-DOS/MS-DOS
 ; SOFTWARE: Patent in Release #1.0, Version #1.30
 ; APPLICATION NUMBER: US/09/059,584
 ; FILING DATE: 14-APR-1998
 ; CLASSIFICATION:
 ; PRIOR APPLICATION DATA:
 ; APPLICATION NUMBER: US 08/778,570
 ; FILING DATE: 03-JAN-1997
 ; CLASSIFICATION:
 ; ATTORNEY/AGENT INFORMATION:
 ; NAME: Stewart, Michael I
 ; REGISTRATION NUMBER: 24973
 ; REFERENCE/DOCKET NUMBER: 1038-794

```

; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (416) 595-1155
; TELEFAX: (416) 595-1163
; INFORMATION FOR SEQ ID NO: 15:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 709 amino acids
; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear
US-09-059-584-15

Query Match 62.3%; Score 2315; DB 4; Length 709;
Best Local Similarity 65.3%; Pred. No. 7.2e-150;
Matches 480; Conservative 77; Mismatches 130; Indels 48; Gaps 15;

Qy 1 MKHIPLTLLCAISAVLLTACGG-SGGSNPAPPTIPNAGSAGNAGGTGNTGGTSTDNV 59
Db 1 MKHIPLTLLCAISAVLLTACGGSGGPNFPASTIPNAGSGNAGNAGGT----- 54

Qy 60 GNAGSAGTGNAGSGNAGSGTGSANTPEPKYQDVPTDKNEKEQVSSIQBPAMGYAMEL 119
Db 55 ---GGNSGAGNAGTGGGAGSAGSASTPEPKYQDVPTDENKKAESVGIQEPANGYVEL 111

Qy 120 KRNAHPLNPNKKEAEKRIALDQKDLVAVGDLTNIPFDKNLIEYLKKSSEVSVKFEAQ 179
Db 112 KLRNWP-----QEQUEHAKINTNDVVKLEGLKHNPFDNSIWQNIKNSKEVQTVYNQE 165

Qy 180 KGGLEN-----NTRLTHKDLSEQKAEKALDNALTOFAQEKYKELIENAHDKKSDAR 234
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Qy 235 NRDLKYVSGNLYSGVYATDHDKNTNRYGYGALYKGSSEAKELPQTSARYGYWDFM 294
Db 226 TRDLKYVRSGYVRSY-SNIIPKKIAGTGDGALFYQGTQAKQLPVSKYKGTWDFM 284

Qy 295 TDAITLNDKYITDLPGIARQWR-SLVSTDEVATLLTKNNKPSDYNAGYGHSSFDVNFA 353
Db 285 TDAKKGQSFSGTSGRLAGDRYSAMSYPHEPSLLTDEKKNPDNNGEYGHSSBFTVDFS 344

Qy 354 DKTIKGLISNOLG--TAVTAKERYKLEADIHGNRFRGSATASDKAEDSKTQHPFTSDA 411
Db 345 KKSUKGEIUSNIQDHKGSVNKKRYDIDANIYGNRFRGSATASDTTEASKRHPFTSDA 404

Qy 412 TNKLEGGFYGPKGBELAGKFLTDNKLFGVFGAKRDK--VEKTBAILDAYALGTFN---N 466
Db 405 KNSLEGGFYGNABELAGKFLTDNKLFGVFGAKRESEAKEKTEAILDAYALGTFNKPBT 464

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Db 465 TNPA--FTANSKKELDNFGNAKKLVLGSTVIDLVPTGATKDVNBF-----KEKPKSATNK 517

Qy 525 AGETLMVNDEVIKVT--YKKNFEVLKFGELSGVDSHVSFLQERTATTGKAVPTTGKAK 582
Db 518 AGETLMVNDEVIKVTGYGRNFEVLKFGELSIGSHVSFLQERTA---EKAVPTGTA 574

Qy 583 YLGNWVGI----TGAGTSGKSFNEAQDIADFDIDFKRSVKGKLTQGTQRTDPVFNKIGE 638
Db 575 YLGNWVGIIKDTGTSTGKSFNEAQDIADFDIDFKRSVKGKLTQGTQRPVFNITQI 634

Qy 639 AGNGWTGKASTTKADAGYKIDSSSTGKSVIENAEVTTGGYGNANMGSGSFTHDSDS 698
Db 635 AGNGWTGTASTAKANVGGYKIDSSSTGKSVIENAKVTGGYGNANMGSGSFTHDSDS 694

Qy 699 KASVVFGRKROQEVK 713
Db 695 KASVVFGRKROQEVK 709

RESULT 5
US-09-059-584-46
; Sequence 46, Application US/09059584
; Patent No. 6440701
; GENERAL INFORMATION:

```

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; APPLICANT: Myers, Lisa E
; APPLICANT: Schryvers, Anthony B
; APPLICANT: Harkness, Robin E
; APPLICANT: Loosmore, Sheena M.
; APPLICANT: Du, Run-Pan
; APPLICANT: Yang, Yan-Ping
; APPLICANT: Klein, Michel H
; TITLE OF INVENTION: Transferrin Receptor Genes of Moraxella
; NUMBER OF SEQUENCES: 60
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Sim & McBurney
; STREET: 6th Floor, 330 University Avenue
; CITY: Toronto
; STATE: Ontario
; COUNTRY: Canada
; ZIP: M5G 1R7
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/09/059,584
; FILING DATE: 14-APR-1998
; CLASSIFICATION:
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/778,570
; FILING DATE: 03-JAN-1997
; CLASSIFICATION:
; ATTORNEY/AGENT INFORMATION:
; NAME: Stewart, Michael I
; REGISTRATION NUMBER: 24973
; REFERENCE/DOCKET NUMBER: 1038-794
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (416) 595-1155
; TELEFAX: (416) 595-1163
; INFORMATION FOR SEQ ID NO: 46:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 706 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
US-09-059-584-46

Query Match 60.5%; Score 2246.5; DB 4; Length 706;
Best Local Similarity 63.5%; Pred. No. 3.4e-145;
Matches 472; Conservative 76; Mismatches 128; Indels 67; Gaps 19;

Qy 1 MKHIPLTLLCAISAVLLTACGGSGSNPPAPPTIPNAGSAGNAGGTGNTGGTSTDNV 60
Db 1 MKHIPLTLLCAISAVLLTACGGSGSNPPAPPTIPNAGSAGNAGGTGNTGNAG---TDN-- 55

Qy 61 NAGGANSAGTGNAGSGNAGSGTGSANTPEPKYQDVPTDKNEKEQVSSIQBPAMGYAMELK 120
Db 56 -----TANAGTGTGNTSGTGSANTPEPKYQDVPTDENKKEQVSSIQBPAMGYGNALS 107

Qy 121 LRNAHPLNPNKKEAEKRIALDQKDLVAVE-----GDLTNIPF-----DKNLIEYLK 168
Db 108 KKNLH-----KQDTPLEKDIITLDGKQVAKGKSPFPFLSDVENKLLDGYIAK 158

Qy 169 SSEVSVKFEAKQGIENNTRLTHKD--LSSEQKEAKYKELDNALTOFAQ--EYKELIE 224
Db 159 MN-----EADKNAIGDRIKKDNKDKSLAKELAKQIKEDYRKS-HBFQQVLSLKNKIF 211

Qy 225 NAHDKKSDARNRDLVYKSGF-----NYLSGVYATDHDKNTNRYGYGALYKGSSETAK 278
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Qy 279 ELP-QTSARYKGYWDFMTD-ATLDNKYITDLPGIARQWRSLVSTDEVATILLTDKNKPS 336
Db 267 ELPTQDAVKYKGHWDFMTDVAKQNRSEVKENIQAGRYYGASSKDEYNRLITDEKNKPE 326

Qy 337 DYNGAYGHSSEFDVNFADKKIKGLKLSNQLSGTA--VTAKERYKIEADIHGNRFRGSATA 394
Db 337 DYNGAYGHSSEFDVNFADKKIKGLKLSNQLSGTA--VTAKERYKIEADIHGNRFRGSATA 394

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Db 327 RYNGEYGHSSBFTVNFKDKLTLGELFSLNQLDSRKGNTVTKRYDIDANIYGNRFRGSATA 386
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 Db 387 SDKAESKTHBFTSDAKNSLEGFGFGNABELAGKFLTDNKLFGVFGAKRESKAGEKT 446
 Qy 453 EAILDAYALGTFPNTNKAFTTFTTKKQDNFGNAKLVGLSTVINLVSVDATKNEFTK 512
 Db 447 EAILDAYALGTFNK--NNATTTTPTTKQDNFGNAKLVGLSTVIDLVPTGVTKD--VNE 503
 Qy 513 FTKDKPTSATNKAETLMDNDEVIKT--YGNFEYLFKGBELSGVDSHVSFLOGERTATT 570
 Db 504 FTKNKPDSATNKAETLMDNDEVIKT--YGNFEYLFKGBELSGVDSHVSFLOGERTATT 563
 Qy 571 GEKAVPTTKAKYLGWVGYITGACTGKSPNEAQDIADFDIDPEKSKVKGKLTTCGRTPD 630
 Db 564 GEKAVPTTKAKYLGWVGYITGACTGKSPNEAQDIADFDIDPEKSKVKGKLTTCGRTPD 623
 Qy 631 VFNITGELTAGNGWTKASTTKADAGYKIDSSSTGKSIENAEVTTGGFYGNANEMGGS 690
 Db 624 VFNITGELTAGNGWTKASTTKADAGYKIDSSSTGKSIENAEVTTGGFYGNANEMGGS 683
 Qy 691 FTHDTSKASVFGTKRQEVK 713
 Db 684 FTHDTSKASVFGTKRQEVK 706

RESULT 6
 US-08-613-009A-9
 ; Sequence 9, Application US/08613009A
 ; Patent No. 6090576
 ; GENERAL INFORMATION:
 ; APPLICANT: Myers, Lisa E
 ; APPLICANT: Schryvers, Anthony B
 ; APPLICANT: Harkness, Robin E
 ; APPLICANT: Loosmore, Sheena M.
 ; APPLICANT: Du, Run-Pan
 ; APPLICANT: Yang, Yan-Ping
 ; APPLICANT: Klein, Michel H
 ; TITLE OF INVENTION: Transferrin Receptor Genes of Moraxella
 ; NUMBER OF SEQUENCES: 31
 ; CORRESPONDENCE ADDRESS:
 ; ADDRESSEE: Sim & McBurney
 ; STREET: 6th Floor, 330 University Avenue
 ; CITY: Toronto
 ; STATE: Ontario
 ; COUNTRY: Canada
 ; ZIP: M5G 1R7
 ; COMPUTER READABLE FORM:
 ; MEDIUM TYPE: Floppy disk
 ; COMPUTER: IBM PC compatible
 ; OPERATING SYSTEM: PC-DOS/MS-DOS
 ; SOFTWARE: Patent In Release #1.0, Version #1.30
 ; CURRENT APPLICATION DATA:
 ; APPLICATION NUMBER: US/08/613,009A
 ; FILING DATE: 08-MAR-1996
 ; CLASSIFICATION: 435
 ; ATTORNEY/AGENT INFORMATION:
 ; NAME: Stewart, Michael I
 ; REGISTRATION NUMBER: 24973
 ; REFERENCE/DOCKET NUMBER: 1038-542
 ; TELEPHONE: (416) 595-1155
 ; TELEFAX: (416) 595-1163
 ; INFORMATION FOR SEQ ID NO: 9:
 ; SEQUENCE CHARACTERISTICS:
 ; LENGTH: 702 amino acids
 ; TYPE: amino acid
 ; STRANDEDNESS: single
 ; TOPOLOGY: linear
 ; US-08-613-009A-9

Query Match 60.3%; Score 2241.5; DB 3; Length 702;

Best Local Similarity 64.9%; Pred. No. 7.5e-145;
 Matches 477; Conservative 70; Mismatches 133; Indels 55; Gaps 21;
 Qy 1 MKHPLTLTLCVAISAVLLTACGGSGGNPPAPTIPNAGSAGNAGGTGNTGGTSTDVNG 60
 Db 1 MKHPLTLTLCVAISAVLLTACGGSGGNPPAPTIPNAGSAGNAGGTGNTGGTSTDVNG 55
 Qy 61 NAGGANSSTGAGNSGNSANTPEPKYQDPTDKNEKEQVSSIOEPAMGYAMELK 120
 Db 56 -----TANAGTGTGNSGNTSANTPEPKYQDPTDKNEKEQVSSIOEPAMGYAMELK 107
 Qy 121 LRNAPLNPNKNKAEKR--IALDQKDLVAVEGDLTNIPTF-----DKNLIYLLKSSSEVVS 174
 Db 108 KINLH--NRQDTPLDKXNIITLDCKQVA--EGKSPPLPFLSDLVENKULDGYAKXN---- 160
 Qy 175 KFEAQKGIIENNTLTHKLSSEOKAEKVEALDNALTOFAQ--EKYKELIENAHDKKSD 232
 Db 161 --VADKNAIGDRIKKNGKISDEELAKQIEAVRKS--HEFQOVLSSLENKIFHSNDGTTK 217
 Qy 233 ARNRDLVVKSGFNYS---GYTATDHDKKNYGYGALYYKSETAKELP--QTSAYK 288
 Db 218 ATTRDLKYVDYGY--YLANDGNLYTVTKDLWNL--GPVGGVGYNGTTTAKELPTQDAVKY 275
 Qy 289 GYWFDMTD--ATLDNKYTDLPGIARQOTWRSLSVSTDEVATLLTDKNKPSDYNGAYHSSSE 347
 Db 276 GHWFDMTDVNRNRRFSEVKENSQAGHYGASSKDEYNRLTKEDSAPDGHSGEYHSSSE 335
 Qy 348 PDVNFADKKIKGLISN---QLSGTAVTAKERYKIEADIHGNRRFRGSATASDKAEDSKTQ 404
 Db 336 FTVNFKEKLTGKLFSLNQLDRHKN--VTKTERYDIDANIHGNRRFRGSATASKNKNDTSK-- 392
 Qy 405 HPFTSDATNKGEGFGPKGBELAGKFLTDNKLFGVFGAKRDK--VEKTEAILDAYALG 462
 Db 393 HPFTSDANNRLEGFGFGPKGBELAGKFLTDNKLFGVFGAKRESKAEKTEAILDAYALG 452
 Qy 463 TENNTKATFTPTTKKQDNFGNAKLVGLSTVINLVSVDATKNEFTTKDKKPTSAT 522
 Db 453 --TFNTSN--ATFTPTTEKQDNFGNAKLVGLSTVIDLVPTDATKNE----FTKDKPESAT 507
 Qy 523 NKAGETLMVNDENVIVTKYKGNFEYLFKGBELSGVDSHVSFLOGERTATTGKAVPTTGKAK 582
 Db 508 NEAGETLMVNDENVIVTKYKGNFEYLFKGBELSGVDSHVSFLOGERTATTGKAVPTTGKAK 567
 Qy 583 YLGNWVGYI-----TGAGTGSFNEAQDIADFDIDPEKSKVKGKLTTCGRTPDPVFNKGEI 638
 Db 568 YLGNWVGYIITGKTGTGTGKSFDTDAQDVADPDIDFGNKSVMGKLTTCGRTPDPVFNKGEI 627
 Qy 639 AGNGWTKASTTKADAGYKIDSSSTGKSIENAEVTTGGFYGNANEMGGSFTHDTS 698
 Db 628 AGNGWTKASTTKADAGYKIDSSSTGKSIENAEVTTGGFYGNANEMGGSFTHDTS 687
 Qy 699 KASVVGTKRQEVK 713
 Db 688 KASVVGTKRQEVK 702

RESULT 7
 US-08-778-570B-11
 ; Sequence 11, Application US/08778570B
 ; Patent No. 6437096
 ; GENERAL INFORMATION:
 ; APPLICANT: Myers, Lisa E
 ; APPLICANT: Schryvers, Anthony B
 ; APPLICANT: Harkness, Robin E
 ; APPLICANT: Loosmore, Sheena M.
 ; APPLICANT: Du, Run-Pan
 ; APPLICANT: Yang, Yan-Ping
 ; APPLICANT: Klein, Michel H
 ; TITLE OF INVENTION: Transferrin Receptor Genes of Moraxella
 ; NUMBER OF SEQUENCES: 43
 ; CORRESPONDENCE ADDRESS:
 ; ADDRESSEE: Sim & McBurney
 ; STREET: 6th Floor, 330 University Avenue


```

QY 121 LRNAHPLNPNKNKEAEKR-IALDOKDLVAVGDLTNIPF-----DKNLEIYKKSSEVVS 174
DB 108 KINLH--NRQDTPLEKNIITLDGKKQVA-EGKKSPLPFLSDVENKLDGDIKKN-- 160
QY 175 KPEAQKGGIENNRTHLTHKDLSEQKAEKVKALDNLALTOFAQ--EYKELIENAHDKKSD 232
DB 161 --VADKNAIGRIKKNKEISDEELAKQIKEAVRKS-HEFOQVLSLENKIFHSNDGTTK 217
QY 233 ARNRDLVYVSGFNYS---GYTATDHDKKNYRGYALYKGSSEAKELP-QTSAYK 288
DB 218 ATTRDLKYVDYGY-YLANDGNLYLTKDKLWNL-GPVGGVFNNGTTAKELPTQDAVKYK 275
QY 289 GYWDFTMD-ATLDNKYTDLPGLARQWRSLVSTDEYATLTDKNKPSDNGYAGHSSE 347
DB 276 GHWFDMTDVNRNRNRFSEVKENSQAGWYVGASSKDEYNRLITKEDSAPDGHSGEYHSSE 335
QY 348 FDNVFNADKKIKGLISN---QLSGTAVTAKERYKIEADIHGNRFRGSATASDKAEDSKTQ 404
DB 336 FTVNFKKLTGKLFSLNLDQRHKN-VTKTERYDIDANIHNRRFRGSATASNKNDTSK-- 392
QY 463 TFNNNTKATTPPTTKKQLDNFNGNAKLVLGSTVINLSTDTATKNEFTKFKTKDPTSAT 522
DB 453 TFNTSN-ATFTPTPEKQLDNFNGNAKLVLGSTVIDLVPDITATKNE----FTKDKPESAT 507
QY 523 NKAGETLMVNDDEVIVKTYGKNFEYLKFGELSVGSHSVFLOGERTATTGEKAVPTTGAK 582
DB 508 NEAGETLMVNDDEVSVKTYGKNFEYLKFGELSVGSHSVFLOGERTATTGEKAVPTTGAK 567
QY 583 YLGNWVGVI---TGAGTGKSFNEAQDIDPDIIDPERKSVKGLTTCQRTDPVFNKGEI 638
DB 628 YLGNWVGVIITGKOTGTGTGKSFDAQVADFDIDFGNKSVSGLITKGRQDPVFSITQI 627
QY 699 KASVVFGTKRQOEYK 713
DB 688 KASVVFGTKRQOEYK 702

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RESULT 9

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US-08-867-941-25
; Sequence 25, Application US/08867941
; Patent No. 5977337
; GENERAL INFORMATION:
; APPLICANT: Loosmore, Sheena M
; APPLICANT: Du, Run-Pan
; APPLICANT: Wang, Qijun
; APPLICANT: Yang, Yan-Ping
; APPLICANT: Klein, Michel H
; TITLE OF INVENTION: LACTOPERRIN RECEPTOR GENES OF MORAXELLA
; NUMBER OF SEQUENCES: 67
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Sim & McBurney
; STREET: 6th Floor, 330 University Avenue
; CITY: Toronto
; STATE: Ontario
; COUNTRY: Canada
; ZIP: M5G 1R7
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patent In Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/867,941
; FILING DATE: 03-JUN-1997
; CLASSIFICATION: 435

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; ATTORNEY/AGENT INFORMATION:
; NAME: Stewart, Michael I
; REGISTRATION NUMBER: 24,973
; REFERENCE/DOCKET NUMBER: 1038-681 MIS:jfb
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (416) 595-1155
; TELEFAX: (416) 595-1163
; INFORMATION FOR SEQ ID NO: 25:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 702 amino acids
; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; US-08-867-941-25

Query Match 60.2%; Score 2237.5; DB 2; Length 702;
Best Local Similarity 64.8%; Pred. No. 1.4e-144;
Matches 476; Conservative 70; Mismatches 134; Indels 55; Gaps 21;

QY 1 MKHIPLTLCVAISAVLLTACGGSGSNPPAPTPIPNAGSAGNAGGTGNTGTTGSTDNVG 60
DB 1 MKHIPLTLCVAISAVLLTACGGSGSNPPAPTPIPNAGSAGNAGGTGNTGTTGSTDNVG 55
QY 61 NAGGANGSGTGNAGSGNANSCTGSANTPEPKYQDVPTDKNEKEQVSSIQEPPAMGYAMELK 120
DB 56 -----TANAGNTGNTSGTGSANTPEPKYQDVPTDKNEKEQVSSIQEPPAMGYAMELK 107
QY 121 LRNAHPLNPNKNKEAEKR-IALDOKDLVAVGDLTNIPF-----DKNLEIYKKSSEVVS 174
DB 108 KINLH--NRQDTPLEKNIITLDGKKQVA-EGKKSPLPFLSDVENKLDGDIKKN-- 160
QY 175 KPEAQKGGIENNRTHLTHKDLSEQKAEKVKALDNLALTOFAQ--EYKELIENAHDKKSD 232
DB 161 --VADKNAIGRIKKNKEISDEELAKQIKEAVRKS-HEFOQVLSLENKIFHSNDGTTK 217
QY 233 ARNRDLVYVSGFNYS---GYTATDHDKKNYRGYALYKGSSEAKELP-QTSAYK 288
DB 218 ATTRDLKYVDYGY-YLANDGNLYLTKDKLWNL-GPVGGVFNNGTTAKELPTQDAVKYK 275
QY 289 GYWDFTMD-ATLDNKYTDLPGLARQWRSLVSTDEYATLTDKNKPSDNGYAGHSSE 347
DB 276 GHWFDMTDVNRNRNRFSEVKENSQAGWYVGASSKDEYNRLITKEDSAPDGHSGEYHSSE 335
QY 348 FDNVFNADKKIKGLISN---QLSGTAVTAKERYKIEADIHGNRFRGSATASDKAEDSKTQ 404
DB 336 FTVNFKKLTGKLFSLNLDQRHKN-VTKTERYDIDANIHNRRFRGSATASNKNDTSK-- 392
QY 405 HPFTSDATNKLGGFYGPKGEELAGKFLTDNKLFGVFGAKRDK--VEKTEAILDAYALG 462
DB 393 HPFTSDANNRLEGFGYGPKGEELAGKFLTDNKLFGVFGAKRESKAEKTEAILDAYALG 452
QY 463 TFNNNTKATTPPTTKKQLDNFNGNAKLVLGSTVINLSTDTATKNEFTKFKTKDPTSAT 522
DB 453 TFNTSN-ATFTPTPEKQLDNFNGNAKLVLGSTVIDLVPDITATKNE----FTKDKPESAT 507
QY 523 NKAGETLMVNDDEVIVKTYGKNFEYLKFGELSVGSHSVFLOGERTATTGEKAVPTTGAK 582
DB 508 NEAGETLMVNDDEVSVKTYGKNFEYLKFGELSVGSHSVFLOGERTATTGEKAVPTTGAK 567
QY 583 YLGNWVGVI---TGAGTGKSFNEAQDIDPDIIDPERKSVKGLTTCQRTDPVFNKGEI 638
DB 568 YLGNWVGVIITGKOTGTGTGKSFDAQVADFDIDFGNKSVSGLITKGRQDPVFSITQI 627
QY 639 AGNGWTGKASTTKADAGGYKIDSSSTGKSVIENAEVTTGGFYGPNANEMGGSFTHDTS 698
DB 628 AGNGWTGKASTTKADAGGYKIDSSSTGKSVIENAEVTTGGFYGPNANEMGGSFTHDTS 687
QY 699 KASVVFGTKRQOEYK 713
DB 688 KASVVFGTKRQOEYK 702

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RESULT 10

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US-09-074-658-25
; Sequence 25, Application US/09074658
; Patent No. 6184371
; GENERAL INFORMATION:
; APPLICANT: Loosmore, Sheena M
; APPLICANT: Run-Pan Du
; APPLICANT: Quijun Wang
; APPLICANT: Yang, Yan-Ping
; APPLICANT: Klein, Michel H
; TITLE OF INVENTION: LACTOFERRIN RECEPTOR GENES OF MORAXELLA
; NUMBER OF SEQUENCES: 78
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Sim & McBurney
; STREET: 6th Floor, 330 University Avenue
; CITY: Toronto
; STATE: Ontario
; COUNTRY: Canada
; ZIP: M5G 1R7
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; FILING DATE: 08-MAY-1998
; CLASSIFICATION: 435
; ATTORNEY/AGENT INFORMATION:
; NAME: Stewart, Michael I
; REGISTRATION NUMBER: 24,973
; REFERENCE/DOCKET NUMBER: 1038-795
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (416) 595-1155
; TELEFAX: (416) 595-1163
; INFORMATION FOR SEQ ID NO: 25:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 702 amino acids
; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear
US-09-074-658-25

Query Match 60.2%; Score 2237.5; DB 3; Length 702;
Best Local Similarity 64.8%; Pred. No. 1.4e-144;
Matches 476; Conservative 70; Mismatches 134; Indels 55; Gaps 21;

Qy 1 MKHIPLTLCVAISAVLLTACGGGSGNPPAPTIPNAGSAGNAGGTGNTGGTSDNVG 60
Db 1 MKHIPLTLCVAISAVLLTACGGGSGNPPAPTIPNAGSAGNAGGTGNTGNAGG---TDN-- 55

Qy 61 NAGGANSCTGNAGSGNANSCTGANTPEPKYQDVPTDKNEQVSSIQEPAMGYAMELK 120
Db 56 -----TANAGNTGNTSGTSGANTPEPKYQDVPTDKNEKDKVSSIQEPAMGYGWS 107

Qy 121 LRNAHLPNPNKNAEKE-IALDQKDLVAVBGDLTNIPF-----DKNLIYLKSSSEVVS 174
Db 108 KINLH--NRQDTPLDEKNIITLDGKQVA-EGKKSPLFSLDVENKLLDGVIAKN--- 160

Qy 175 KPEAQKGIEENRITLTHDLSSEQKEAKVKALDNALNLTQFAQ--EKYKELIENAHDKSD 232
Db 161 --VADKNAIGRIKKNKEISDEELAKQIKEAVRKS-HEFQQLVSSLLENKIFHSNDGTTK 217

Qy 233 ARNRDLVVKGFNYS---GYTATDHDKNTNYGYGALYKGSSEAKELP-QTSAKYK 288
Db 218 ATTRDLKVDYGY-YLANDGNLYLVTKTDKWLNL-GPVGGVYFNGTTAKELPTQDAVYK 275

Qy 289 GYWDFTMD-ATLDNKYDLPGLATQWRSLVSTDEVATLLTDKNKPSDYNAGYGHSS 347
Db 276 GHWDFMTDVANRRNPFSEKENSQAGWYGYGASSKDEYNRLITKEDSAPDGHSGYGHSS 335

Qy 348 FDNVADKKIKGKLISN---QLSGPNTAKERYKIEADIHGNRFRGSATASDKAEDSKTQ 404
Db 336 FTVNFKKKLTKGLFSLNLDQRHKN-VTKTERYDIDANIHGNRFRGSATASGNKNDTSK-- 392

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Qy 405 HPFTSDATNKLEGGFYGPKGEELAGKELTDNDKLVGVFGAKRDK--VEKTEAILDAYALG 462
Db 393 HPFTSDANNRLEGGFYGPKGEELAGKELTDNDKLVGVFGAKRESKAEKTEAILDAYALG 452

Qy 463 TFNNVTKATFTPTTKKQLDNFNGNAKKLVLGSTVINLVSTDAKNEFTKKPKTKDKPPTSAT 522
Db 453 TFNTSN-ATTFTPTTERQLDNFNGNAKKLVLGSTVIDLVPTDATKNE---FTKDKPESAT 507

Qy 523 NKAGETLMVNDDEVIVTKYGNFEYLKFGELSVGDSHVSFLOGERTATTGEKAVPTTGKAK 582
Db 508 NEAGETLMVNDDEVSVTKYGNFEYLKFGELSVGDSHVSFLOGERTATTGEKAVPTTGAK 567

Qy 583 YLGNWVGVI---TGAGTGKSFNEAQAIDFDIDFERKSVKGLITTOGRDTPPVFNKGEI 638
Db 568 YLGNWVGVIITGKDTGTGTGKSFDTDAQDVAQDFDIDFGNKSVMGKLIITKGRQDPVSIITQI 627

Qy 639 AGNGWTKASTTKADAGGYKIDSSSTOKSVIENAEVTTGGFYGNANEMGGSFTHDTHDS 698
Db 628 AGNGWTGTASTTKADAGGYKIDSSSTGKSIKADANVTGGFYGNANEMGGSFTHNADDS 687

Qy 699 KASVVFCTKQOEYK 713
Db 688 KASVVFCTKQOEYK 702

RESULT 11
US-08-778-570B-16
; Sequence 16, Application US/08778570B
; Patent No. 6437096
; GENERAL INFORMATION:
; APPLICANT: Myers, Lisa E
; APPLICANT: Schryvers, Anthony B
; APPLICANT: Harkness, Robin E
; APPLICANT: Loosmore, Sheena M
; APPLICANT: Du, Run-Pan
; APPLICANT: Yang, Yan-Ping
; APPLICANT: Klein, Michel H
; TITLE OF INVENTION: Transferrin Receptor Genes of Moraxella
; NUMBER OF SEQUENCES: 43
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Sim & McBurney
; STREET: 6th Floor, 330 University Avenue
; CITY: Toronto
; STATE: Ontario
; COUNTRY: Canada
; ZIP: M5G 1R7
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; FILING DATE: 03-JAN-1997
; CLASSIFICATION: 536
; ATTORNEY/AGENT INFORMATION:
; NAME: Stewart, Michael I
; REGISTRATION NUMBER: 24973
; REFERENCE/DOCKET NUMBER: 1038-664
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (416) 595-1155
; TELEFAX: (416) 595-1163
; INFORMATION FOR SEQ ID NO: 16:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 689 amino acids
; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear
US-08-778-570B-16

Query Match 59.7%; Score 2218; DB 4; Length 689;
Best Local Similarity 64.3%; Pred. No. 2.9e-143;

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Matches 460; Conservative 77; Mismatches 130; Indels 48; Gaps 15;
Qy 21 CGG-SGGSNPAPPIPNAGSAGNAGTGTGCTGTDNVNAGGANGSGTGNAGSNAN 79
Db 1 CGSSGGFNPPASTPIPNAGSAGNAGNAGGT-----CGANSAGNAGGTGGAN 51
Qy 80 SGTGSANTPEPKYQDVPTDKNEKEQVSSIQBPAMGYAMELKLRNAHPLNPNKNEAEKRI 139
Db 52 SGAGSASTPEPKYKDVPTDENKKAESVGIQBPAMGYGVELKLRNWI-----QEQEHA 105
Qy 140 ALDQKLVAVEGDLTNIPFDKNLIEYLKSEVVSKEFPAQKGGIEN-----NTRLTHKDL 194
Db 106 KINTNDVVKLEGLDKNHFPDINSIQNKSEVQTVVYVYQKQNIQKREKQRPDKKL 165
Qy 195 SSEQKEAKVEALDNLTPAQEKYKELIENAHDKSDARNRDLEYVKGSGNYLSGYTAT 254
Db 166 DDVALQAYIEKVLDDRLTELAKPIYEKNINSHDKQNKARTDLKYVRSYIYRSY-SN 224
Qy 255 DHDKKTNVRYGYGALYYKGSATKELPQTSYKGYWDFMTDNLNKTDLPGIARQTQ 314
Db 225 IIPKKIATGFDGALFYOGTQAKQLPVSVQYKGYWDFMTDAKKGQSFSGTSQRLAG 284
Qy 315 WR-SLVSTDEYATLLTDKNKPSDNGAYGHSSEFVNFADKKIKGLISNQLSG--TAV 371
Db 285 DRYSAMSYHEYPSSLTDENKPNYNGEYGHSEFTVDFSKSLKGLSSNIQDHKGSV 344
Qy 372 TAKERYKIEADIHGNRFRGSATASDAEDSKTQHPFTSDATNKLEGGYFGPKGBELAGKF 431
Db 345 NKTRYDIDANIYGNRFRGSATASDTTEASKSKHPFTSDAKNSLEGGYFGPNABELAGKF 404
Qy 432 LTDDNKLFGVGAQRDK--VEKTEAILDAYALGTGN---NTNKATTTTPTTKKOLDNFGN 486
Db 405 LTNDNKLFGVGAQRSEAKSEKTEAILDAYALGTGNKPTNPA--FTANSKELDNFGN 462
Qy 487 AKKLVLSGTVNLVSTDATK--NEFTKFTKDKPTSATNKAGETLWNVDEIVKTV--YKG 542
Db 463 AKKLVLSGTVNLVSTDATK--NEFTKFTKDKPTSATNKAGETLWNVDEIVKTVYGR 517
Qy 543 NFEYLFKFGELSVGDSHSVFLQERTATTGKAVPTTGKAKYLGWVGYI-----TCAGTGK 598
Db 518 NFEYLFKFGELSVGDSHSVFLQERTATA---EKAVPTGTAKYLGWVGYITKDTGTSTGK 574
Qy 599 SFNEAQDIADFDIDPERKSVKGLTQGRTPVFNKIEAGNWTGKASTTKADAGYK 658
Db 575 SFNEAQDIADFDIDPERKSVKGLTQGRTPVFNITGQIAGNWTGTAATAKANVGKYK 634
Qy 659 IDSSTGKSIIVENAEVGGYGPANEMGGSFTHDTSKASVVFGTKROEYK 713
Db 635 IDSSTGKSIIVENAKVTGGYGPANEMGGSFTHDTSKASVVFGTKROEYK 689

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RESULT 12

US-09-059-594-16
Sequence 16, Application US/09059584
Patent No. 6440701

GENERAL INFORMATION:

APPLICANT: Myers, Lisa E
APPLICANT: Schryvers, Anthony B
APPLICANT: Harkness, Robin E
APPLICANT: Loomsore, Sheena M.
APPLICANT: Du, Run-Pan
APPLICANT: Yang, Yan-Ping
APPLICANT: Klein, Michel H

TITLE OF INVENTION: Transferrin Receptor Genes of Moraxella

NUMBER OF SEQUENCES: 60

CORRESPONDENCE ADDRESS:

ADDRESSEE: Sim & McBurney
STREET: 6th Floor, 330 University Avenue
CITY: Toronto
STATE: Ontario
COUNTRY: Canada
ZIP: M5G 1R7

COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/059,584
FILING DATE: 14-APR-1998
CLASSIFICATION:
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/778,570
FILING DATE: 03-JAN-1997
CLASSIFICATION:
ATTORNEY/AGENT INFORMATION:
NAME: Stewart, Michael I
REGISTRATION NUMBER: 24973
REFERENCE/DOCKET NUMBER: 1038-794
TELECOMMUNICATION INFORMATION:
TELEPHONE: (416) 595-1155
TELEFAX: (416) 595-1163
INFORMATION FOR SEQ ID NO: 16:
SEQUENCE CHARACTERISTICS:
LENGTH: 689 amino acids
TYPE: amino acid
STRANDEDNESS: single
TOPOLOGY: linear
US-09-059-594-16

Query Match 59.7%; Score 2218; DB 4; Length 689;
Best Local Similarity 64.3%; Pred. No. 2.9e-143;
Matches 460; Conservative 77; Mismatches 130; Indels 48; Gaps 15;

```

Qy 21 CGG-SGGSNPAPPIPNAGSAGNAGTGTGCTGTDNVNAGGANGSGTGNAGSNAN 79
Db 1 CGSSGGFNPPASTPIPNAGSAGNAGNAGGT-----CGANSAGNAGGTGGAN 51
Qy 80 SGTGSANTPEPKYQDVPTDKNEKEQVSSIQBPAMGYAMELKLRNAHPLNPNKNEAEKRI 139
Db 52 SGAGSASTPEPKYKDVPTDENKKAESVGIQBPAMGYGVELKLRNWI-----QEQEHA 105
Qy 140 ALDQKLVAVEGDLTNIPFDKNLIEYLKSEVVSKEFPAQKGGIEN-----NTRLTHKDL 194
Db 106 KINTNDVVKLEGLDKNHFPDINSIQNKSEVQTVVYVYQKQNIQKREKQRPDKKL 165
Qy 195 SSEQKEAKVEALDNLTPAQEKYKELIENAHDKSDARNRDLEYVKGSGNYLSGYTAT 254
Db 166 DDVALQAYIEKVLDDRLTELAKPIYEKNINSHDKQNKARTDLKYVRSYIYRSY-SN 224
Qy 255 DHDKKTNVRYGYGALYYKGSATKELPQTSYKGYWDFMTDNLNKTDLPGIARQTQ 314
Db 225 IIPKKIATGFDGALFYOGTQAKQLPVSVQYKGYWDFMTDAKKGQSFSGTSQRLAG 284
Qy 315 WR-SLVSTDEYATLLTDKNKPSDNGAYGHSSEFVNFADKKIKGLISNQLSG--TAV 371
Db 285 DRYSAMSYHEYPSSLTDENKPNYNGEYGHSEFTVDFSKSLKGLSSNIQDHKGSV 344
Qy 372 TAKERYKIEADIHGNRFRGSATASDAEDSKTQHPFTSDATNKLEGGYFGPKGBELAGKF 431
Db 345 NKTRYDIDANIYGNRFRGSATASDTTEASKSKHPFTSDAKNSLEGGYFGPNABELAGKF 404
Qy 432 LTDDNKLFGVGAQRDK--VEKTEAILDAYALGTGN---NTNKATTTTPTTKKOLDNFGN 486
Db 405 LTNDNKLFGVGAQRSEAKSEKTEAILDAYALGTGNKPTNPA--FTANSKELDNFGN 462
Qy 487 AKKLVLSGTVNLVSTDATK--NEFTKFTKDKPTSATNKAGETLWNVDEIVKTV--YKG 542
Db 463 AKKLVLSGTVNLVSTDATK--NEFTKFTKDKPTSATNKAGETLWNVDEIVKTVYGR 517
Qy 543 NFEYLFKFGELSVGDSHSVFLQERTATTGKAVPTTGKAKYLGWVGYI-----TCAGTGK 598
Db 518 NFEYLFKFGELSVGDSHSVFLQERTATA---EKAVPTGTAKYLGWVGYITKDTGTSTGK 574
Qy 599 SFNEAQDIADFDIDPERKSVKGLTQGRTPVFNKIEAGNWTGKASTTKADAGYK 658

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STRANDEDNESS: single
TOPOLOGY: linear
US-08-778-570B-12

Query Match 57.7%; Score 2144.5; DB 4; Length 682;
Best Local Similarity 63.9%; Pred. No. 3e-138;
Matches 457; Conservative 70; Mismatches 133; Indels 55; Gaps 21;

Qy 21 CGSGGNNPPAPTPIPNAGSAGNAGGTGNTGGTSTDNVGNAGGANSSTGNAGSGNANS 80
Db 1 CGSGGNNPPAPTPIPNAGSAGNAGGTGNTGGTSTDNVGNAGGANSSTGNAGSGNANS 47
Qy 81 GTGSANTPEPKYQDVPTDKNEQVSSIOBPAMGYAMELKLNRNAHPLNPNKKEAEKR-I 139
Db 48 GTGSANTPEPKYQDVPTDKNEQVSSIOBPAMGYAMELKLNRNAHPLNPNKKEAEKR-I 105
Qy 140 ALDQKDLVAVGDLTNTPF-----DKNLI EYLKXSEVSKFEAQGGIENNTLTHKOL 194
Db 106 TLDGKKQVA-EGKKSPLPFLSDVENKLLDGYIAKMN-----VADKNAIGDRIKKNGKEI 158
Qy 195 SSEQEAKVKEALDNLTOFAQ--EYKELIENAHDKSDARNRDL EYVKSGFNYLS--- 249
Db 159 SDEBLAQI KEAVRKS--HEFOQVLSLENKIFHSNDGTTKATTRDLKYVDYGY-YLANDG 216
Qy 250 GYTATDHDKNTYRGYGYALYKGSSETAKELP--OTS AKYGYWDFMTD--ATLDNKYTDLP 307
Db 217 NYLTKVTDKLNWL--GPVGGVYFNGTTAKELPTQDAVKYKGHWDFMTDVANRRNRFSEVK 275
Qy 308 GIARQOTWRSVLSTVNLVSTDATNEFTKFTKDKPTSATNKAGETLMVNDDEVIVKTYGK 364
Db 276 ENSQAGWYGYGASSKDEYNRLLTKEDSAPDGHSGEYGHSEFTVNFKEKLTGKLFSLNQD 335
Qy 365 QLSGTAVTAKERYKIEADIHGNRFRGSATASDKAEDSKTQHPPTSDATNKLEGGFYGPKG 424
Db 336 RHKGN-VTKTERYDIDANI HGNRFRGSATASNKNDTSK--HPFTSDANNRLEGGFYGPKG 392
Qy 425 BELAGKELTDNKLFGVFGAKRDK--VEKTEAILDAVALGTFNNTKATTPPTTKQLD 482
Db 393 BELAGKELTDNKLFGVFGAKRDK--VEKTEAILDAVALGTFNNTKATTPPTTKQLD 451
Qy 483 NFGNAKLVLGSTVINLSTVNLVSTDATNEFTKFTKDKPTSATNKAGETLMVNDDEVIVKTYGK 542
Db 452 NFGNAKLVLGSTVINLSTVNLVSTDATNEFTKFTKDKPTSATNKAGETLMVNDDEVIVKTYGK 507
Qy 543 NFEYLKFGELSVGDSHVSFLQERTATTGKAVPTTGKAKYKLNWVGYI-----TGAGTGK 598
Db 508 NFEYLKFGELSVGDSHVSFLQERTATTGKAVPTTGKAKYKLNWVGYI-----TGAGTGK 567
Qy 599 SFNEAQDIADFDIDPEKSVKGLTTOGRTDPVFNKIEIAGNGWTGKASTTKADAGYK 658
Db 568 SFTDAQDVADFDIDFGNKSVSGLITKGRQDPVFSITGQIAGNGWTGKASTTKADAGYK 627
Qy 659 IDSSTGKSVIENAEVTFGGFYGNANEMGGSFTHDITDSDKASVVFQKQOEYK 713
Db 628 IDSSTGKSVIENAEVTFGGFYGNANEMGGSFTHDITDSDKASVVFQKQOEYK 682

RESULT 15
US-09-584-12
Sequence 12, Application US/09059584
Patent No. 6440701
GENERAL INFORMATION:
APPLICANT: Myers, Lisa E
APPLICANT: Schryvers, Anthony B
APPLICANT: Harkness, Robin E
APPLICANT: Loosmore, Sheena M.
APPLICANT: Du, Run-Pan
APPLICANT: Yang, Yan-Ping
APPLICANT: Klein, Michel H
TITLE OF INVENTION: Transferrin Receptor Genes of Moraxella
NUMBER OF SEQUENCES: 60
CORRESPONDENCE ADDRESS:
ADDRESSEE: Sim & McBurney

STREET: 6th Floor, 330 University Avenue
CITY: Toronto
STATE: Ontario
COUNTRY: Canada
ZIP: M5G 1R7
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/059,584
FILING DATE: 14-APR-1998
CLASSIFICATION:
PRIOR APPLICATION DATA: US 08/778,570
APPLICATION NUMBER: 03-JAN-1997
CLASSIFICATION:
ATTORNEY/AGENT INFORMATION:
NAME: Stewart, Michael I
REGISTRATION NUMBER: 24973
REFERENCE/DOCKET NUMBER: 1038-794
TELECOMMUNICATION INFORMATION:
TELEPHONE: (416) 595-1155
TELEFAX: (416) 595-1163
INFORMATION FOR SEQ ID NO: 12:
SEQUENCE CHARACTERISTICS:
LENGTH: 682 amino acids
TYPE: amino acid
STRANDEDNESS: single
TOPOLOGY: linear
US-09-059-584-12

Query Match 57.7%; Score 2144.5; DB 4; Length 682;
Best Local Similarity 63.9%; Pred. No. 3e-138;
Matches 457; Conservative 70; Mismatches 133; Indels 55; Gaps 21;

Qy 21 CGSGGNNPPAPTPIPNAGSAGNAGGTGNTGGTSTDNVGNAGGANSSTGNAGSGNANS 80
Db 1 CGSGGNNPPAPTPIPNAGSAGNAGGTGNTGGTSTDNVGNAGGANSSTGNAGSGNANS 47
Qy 81 GTGSANTPEPKYQDVPTDKNEQVSSIOBPAMGYAMELKLNRNAHPLNPNKKEAEKR-I 139
Db 48 GTGSANTPEPKYQDVPTDKNEQVSSIOBPAMGYAMELKLNRNAHPLNPNKKEAEKR-I 105
Qy 140 ALDQKDLVAVGDLTNTPF-----DKNLI EYLKXSEVSKFEAQGGIENNTLTHKOL 194
Db 106 TLDGKKQVA-EGKKSPLPFLSDVENKLLDGYIAKMN-----VADKNAIGDRIKKNGKEI 158
Qy 195 SSEQEAKVKEALDNLTOFAQ--EYKELIENAHDKSDARNRDL EYVKSGFNYLS--- 249
Db 159 SDEBLAQI KEAVRKS--HEFOQVLSLENKIFHSNDGTTKATTRDLKYVDYGY-YLANDG 216
Qy 250 GYTATDHDKNTYRGYGYALYKGSSETAKELP--OTS AKYGYWDFMTD--ATLDNKYTDLP 307
Db 217 NYLTKVTDKLNWL--GPVGGVYFNGTTAKELPTQDAVKYKGHWDFMTDVANRRNRFSEVK 275
Qy 308 GIARQOTWRSVLSTVNLVSTDATNEFTKFTKDKPTSATNKAGETLMVNDDEVIVKTYGK 364
Db 276 ENSQAGWYGYGASSKDEYNRLLTKEDSAPDGHSGEYGHSEFTVNFKEKLTGKLFSLNQD 335
Qy 365 QLSGTAVTAKERYKIEADIHGNRFRGSATASDKAEDSKTQHPPTSDATNKLEGGFYGPKG 424
Db 336 RHKGN-VTKTERYDIDANI HGNRFRGSATASNKNDTSK--HPFTSDANNRLEGGFYGPKG 392
Qy 425 BELAGKELTDNKLFGVFGAKRDK--VEKTEAILDAVALGTFNNTKATTPPTTKQLD 482
Db 393 BELAGKELTDNKLFGVFGAKRDK--VEKTEAILDAVALGTFNNTKATTPPTTKQLD 451
Qy 483 NFGNAKLVLGSTVINLSTVNLVSTDATNEFTKFTKDKPTSATNKAGETLMVNDDEVIVKTYGK 542
Db 452 NFGNAKLVLGSTVINLSTVNLVSTDATNEFTKFTKDKPTSATNKAGETLMVNDDEVIVKTYGK 507

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Qy 543 NFEYLKFGELSVGSHSVFLQGERATTGKAVPTTGKAKYLGNNVGYI-----TGAGTGK 598
Db 508 NFEYLKFGELSTGGSHSVFLQGERATTGKAVPTTGKAKYLGNNVGYITGKDTGTGTGK 567
Qy 599 SFNEAQDIDIDFERKSVKGLTTQGRTPVFNKGEIAGNGWTGKASTTKADAGGYK 658
Db 568 SFTAQDVADFDIDFGNKSVSGLTKRQDPVFSITGQIAGNGWTGTAFTTKADAGGYK 627
Qy 659 IDSSTGKSVIENAEVTFGGYGPANEMGGSFTHDTSKASVVFGTKRQGEVK 713
Db 628 IDSSTGKSVIKOANVTGGYGPANEMGGSFTHNADDSKASVVFGTKRQGEVK 682

RESULT 16
US-09-584-49
; Sequence 49, Application US/09059584
; Patent No. 6440701
; GENERAL INFORMATION:
; APPLICANT: Myers, Lisa E
; APPLICANT: Schryvers, Anthony B
; APPLICANT: Harkness, Robin E
; APPLICANT: Loosmore, Sheena M.
; APPLICANT: Du, Run-Pan
; APPLICANT: Yang, Yan-Ping
; APPLICANT: Klein, Michel H
; TITLE OF INVENTION: Transferrin Receptor Genes of Moraxella
; NUMBER OF SEQUENCES: 60
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Sim & McBurney
; STREET: 6th Floor, 330 University Avenue
; CITY: Toronto
; STATE: Ontario
; COUNTRY: Canada
; ZIP: M5G 1R7
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patent In Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/09/059,584
; FILING DATE: 14-APR-1998
; CLASSIFICATION:
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/778,570
; FILING DATE: 03-JAN-1997
; CLASSIFICATION:
; ATTORNEY/AGENT INFORMATION:
; NAME: Stewart, Michael I
; REGISTRATION NUMBER: 24973
; REFERENCE/DOCKET NUMBER: 1038-794
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (416) 595-1155
; TELEFAX: (416) 595-1163
; INFORMATION FOR SEQ ID NO: 49:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 713 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
;
US-09-059-584-49
Query Match 57.6%; Score 2140; DB 4; Length 713;
Best Local Similarity 62.4%; Pred. No. 6,5e-138;
Matches 467; Conservative 70; Mismatches 141; Indels 70; Gaps 23;

Qy 1 MKHIPLTLCAISAVLLTACGGSGGNPPAPTIPNAGSAGNAGGTGTGTTGSTDNVG 60
Db 1 MKHIPLTLCAISAVLLTACGGSGGNPPAPTIPNAGSAGNAGGTGTGTTGSTDNVG 60
Qy 61 NAGGANGSGTNAGSGNANSCTGSAANTPEPKYQDVPTDKNEKEQVSSIQEPAMGYAMELK 120
Db 56 -----TANAGTGGTSSGTSGASTSEPKYQDVPTTPNNKQVSSIQEPAMGYAMALS 107
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Qy 121 LRNAH-----PLPNKNKEAEKRIALDQKOLVAVEGLDITNIPF-----DNKLIYLBKSS 170
Db 108 KINLYDQODTFL-----DAKNIITLDGKQVA-DNOKSPLPFSLDVENKLLDGVIAKMN 160
Qy 171 EVVSKFAQKGGIENNTLTHKOLSSQKEAKVKEALDNLATQFAQ--EKYKEIENAHN 228
Db 161 EADNVAIGERIKRNE---QNKKISDEBLAKKIKENVRKS-PEFQOVLSSIKATTFHSND 216
Qy 229 KKSAPARNRDLVYKSGF-----NYLSGYTATDHDKNTNRYGYYGALYYKSGSETAKELP- 281
Db 217 KTKATTRDLKYDYGYLYLVNDANYLT--VKTDPKLWN-SGPVGGVYGGSTTAKELPT 273
Qy 282 QTSARYGYWDFMTD-ATLDNKYTDLFGIARQOTQWRSILVSTDEYATLLTDKNKPSDYNG 340
Db 274 QDAVKYKGHWDFMTDVAKKRNRFPSEVKETQAGWMYGASSKDEYNRLLTAKADAAPDNYSG 333
Qy 341 AYGHSSSEFDVNFADKKIKGLISNQLSG--TAVTAKERYKIEADIHGNRFRGSATASDKA 398
Db 334 EYGHSSSEFTVNFKEKLTGELFSLQDSHKQVTKTKRYDIKADIHGNRFRGSATATDKA 393
Qy 399 EDSKTOHPFTSDATNKLEGGFYGPKGELAGKPLTDDNKLFGVFGAKRD-KVEKTEALD 457
Db 394 EDSKSKHPFTSHAKDLEGGFYGPKGELAGKPLTDDNKLFGVFGAKGEGNVEKTEALD 453
Qy 458 AYALGTFN---NTNKATTFPTTKQLDNFGNAKKLVLGSTVINLVSVDATK--NEPTTK 512
Db 454 AYALGTFNKPGTTNPA--FTANSKKELDNFGNAKKLVLGSTVIDLVPDTATKDVNEP--- 508
Qy 513 FTKDKPYSATNKAGETLMVNDDEVIVKTYGNKFNFKGLFSGELSVGDSHVSFLQGERATTGGE 572
Db 509 --KEKPKSATNKAGETLMVNDDEVSVKTYGNKFNFKGLFSGELSVGDSHVSFLQGERATTGGE 566
Qy 573 KAVPTTGKAKYLGNNVGYITGAGT-----GKSFNEAQDIDIDFERKSVKGLTTQG 626
Db 567 KAVPTTGKAKYLGNNVGYITGAGSSKSGTDGKGTDAKDIDFIDEKKSVMGKLTTKD 626
Qy 627 RTDPVFNKGEIAGNGWTGKASTTKADAGGYKIDSSSTGKSVIENAEVTFGGYGPANANE 686
Db 627 RQDPVFNITGELIAGNGWTGKASTAEANAGGYKIDSSSTGKSVIKDAVVTGTFYGPANATE 686
Qy 687 MGSFTHDTSKASVVFGTKRQGEVK 713
Db 687 MGSFTHNSGNDGKSVVFGTKK-QEVK 713

RESULT 17
US-09-059-584-51
; Sequence 51, Application US/09059584
; Patent No. 6440701
; GENERAL INFORMATION:
; APPLICANT: Myers, Lisa E
; APPLICANT: Schryvers, Anthony B
; APPLICANT: Harkness, Robin E
; APPLICANT: Loosmore, Sheena M.
; APPLICANT: Du, Run-Pan
; APPLICANT: Yang, Yan-Ping
; APPLICANT: Klein, Michel H
; TITLE OF INVENTION: Transferrin Receptor Genes of Moraxella
; NUMBER OF SEQUENCES: 60
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Sim & McBurney
; STREET: 6th Floor, 330 University Avenue
; CITY: Toronto
; STATE: Ontario
; COUNTRY: Canada
; ZIP: M5G 1R7
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patent In Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/09/059,584
; FILING DATE: 14-APR-1998
; CLASSIFICATION:
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/778,570
; FILING DATE: 03-JAN-1997
; CLASSIFICATION:
; ATTORNEY/AGENT INFORMATION:
; NAME: Stewart, Michael I
; REGISTRATION NUMBER: 24973
; REFERENCE/DOCKET NUMBER: 1038-794
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (416) 595-1155
; TELEFAX: (416) 595-1163
; INFORMATION FOR SEQ ID NO: 49:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 713 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
;
US-09-059-584-49
Query Match 57.6%; Score 2140; DB 4; Length 713;
Best Local Similarity 62.4%; Pred. No. 6,5e-138;
Matches 467; Conservative 70; Mismatches 141; Indels 70; Gaps 23;
```



```

; FILING DATE: 14-APR-1998
; CLASSIFICATION:
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/778,570
; FILING DATE: 03-JAN-1997
; CLASSIFICATION:
; ATTORNEY/AGENT INFORMATION:
; NAME: Stewart, Michael I
; REGISTRATION NUMBER: 1038-794
; REFERENCE/DOCKET NUMBER: 1038-794
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (416) 595-1155
; TELEFAX: (416) 595-1163
; INFORMATION FOR SEQ ID NO: 51:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 712 amino acids
; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; US-09-059-584-51

Query Match 51.9%; Score 1929; DB 4; Length 712;
Best Local Similarity 54.5%; Pred. No. 1.6e-123;
Matches 402; Conservative 104; Mismatches 180; Indels 52; Gaps 15;

Qy 1 MKGHPITLCAISAVLITACGGSGSNPPAPTPIPAGSAGNAGGTGCTGSGTDNVG 60
Db 1 MKGHPITLCAISAVLITACGGSGSNPPAPTPIPAGSAGNAG--SGTGGAGSTDN-- 56

Qy 61 NAGGANSCTGNAGNSGNSANTPEPKYQDVPTDKNEKVOSSIOEPAMGYAMELK 120
Db 57 -----AANAGSTGGASSGTSGASTOKPKYQDVPTDKNKDEVSGIOEPAMGYVBLK 108

Qy 121 LRNAPLNPKNKEAKRIALDOKDLVAVGDLTNIPDPKNLIEYLKSSSEWSKFEAQK 180
Db 109 LRNWIP-----QEQEHEAKINTNDVVKLGDLKHPNFDNSIQWINKSEVQTVYNQEK 162

Qy 181 GGIENNTLTKHLSSEQKEAKVEALDNALTOFAQEKYKELIENAHDKKSDARNRLEY 240
Db 163 QNIENQIKKENKELDKALKALIEKVLDDYLTSLAKPTIYERINDSHDQKQKARTDLKY 222

Qy 241 VKSGNYLSGYTATDHDKNTVRYGYGALYKYGSETAKELPQTSKAKYGYWDFMTDALT 300
Db 223 VRSGYIYRSYSGNIDIOKIAKTGPDGALFYGTQAKQLPVEVKYIGTWDFMTDAKGG 282

Qy 301 NKYTDLPGIARQOWRSLVSTDEVATLLTDKNKPSDYNAGYHSSSEFDVNFADKKIKGK 360
Db 283 QSFSSFE--RRAGDRYSAMSSHEYPSSLITDDKNKPDYNDYHSSSEFTVDFSKSLTGG 340

Qy 361 LISN--QLSGTAVTAKERYKIEADIHGNNRFRGSATASDKAEDSKTOHPPTSDATNKLGG 418
Db 341 LFSNLQDHHKGVTKTKRYDINARIHGNNRFRGSATAINKNDESKAKHPFTSDADNRLEGG 400

Qy 419 FYGPKGRELAKFELTDNNKLFQVFGAKRD--KVEKTEALIDAYALGTEN--NTNKAITFT 474
Db 401 FYGPNAEELAKFLTDNNKLFQVFGAKQSEAKTEALIDAYALGTENKSGTTNPA--FT 458

Qy 475 PFTKQLDNFGNAKLVLGSTVINLVSATDNKNEFTKTKKPSATNKAAGETLMVND 534
Db 459 ANSKELDNFGNINKLVLSIVIDLTO---GNDPVKTIKKEKATTNQAGEPLTVNDK 514

Qy 535 VIVTYGQNFYLPFGELSGVDSHSVFLQGBERTATTG--EKAVPTTGKAKYLGNNWVGVI 592
Db 515 VRVQCCSNLEHLKFGSLGSDNSVFLQGBERTATKDKDKAMPVAGNAKYRGTWAGYVA 574

Qy 593 GAGTGKSFNEAQDIAD-----FDIDPERKSVKGLITQGRTD--PVNIGETAGNWT 644
Db 575 GSGNTSKAYEAQQFADNANRAEFVDVFANKSLTGKLIENPSSDGKSAFDITATIDNGFS 634

Qy 645 GKASPTTKADAGYKIDS--SSTGKSIVIENAEVTCGGYPGNANEMGGSFTHDTD----- 696
Db 635 GRANTPDITGGLKIDSKNSSEGR--VIVKDAIVGGFYGPQANELGGSFYTKNSDAGNQD 693

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Qy 697 -DSKASVVFGTKRQOEVK 713
Db 694 KDSSASVVFGARKQOEVK 711

RESULT 18
US-09-540-236-2388
; Sequence 2388, Application US/09540236
; Patent No. 6673910
; GENERAL INFORMATION:
; APPLICANT: Gary L. Breton et al.
; TITLE OF INVENTION: NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING TO MORAXELLA CATA
; FILE OF INVENTION: FOR DIAGNOSTICS AND THERAPEUTICS
; FILE REFERENCE: 2709.2005-001
; CURRENT APPLICATION NUMBER: US/09/540.236
; CURRENT FILING DATE: 2000-04-04
; NUMBER OF SEQ ID NOS: 3840
; SEQ ID NO 2388
; LENGTH: 416
; TYPE: PRT
; ORGANISM: M.catarrhalis
; US-09-540-236-2388

Query Match 43.0%; Score 1599; DB 4; Length 416;
Best Local Similarity 77.8%; Pred. No. 2.8e-101;
Matches 322; Conservative 32; Mismatches 42; Indels 18; Gaps 8;

Qy 311 RQTO-----WRSLSVSTDYATLLTDKNKPSDYNAGYHSSSEFDVNFADKKIKGLISNQ 365
Db 9 RQTPMGVWVFLMSMQHSC--QPKIPSPSNYNGAYGHSSEFDVNFANKVTKGLISNQ 65

Qy 366 LSGTAVTAKERYKIEADIHGNNRFRGSATASDKAEDSKTOHPPTSDATNKLGGFYGPKE 425
Db 66 LSGKTVTAKERYKIEADIHGNNRFRGSATASEKTDSESKHPFTSDAKDKLGGFYGPKE 125

Qy 426 ELACKETTDNNKLFQVFGAKRD--KVEKTEALIDAYALGTENNTKATTTFTFTKKQLDNF 484
Db 126 ELAKFUTDNNKLFQVFGAKQGEAKTEALIDAYALGTF--NTNDATTTFTFTKKQLDNF 184

Qy 485 GNAKGLVLGSTVINLVSATDNKNEFTKTKKPSATNKAAGETLMVNDVIVTKYGNF 544
Db 185 GNAKGLVLGSTVIDLVPTDAKD--VNEFTKNKPESATNKAAGETLMVNDKVSVKTYGNF 242

Qy 545 EYLKFGELSGVDSHSVFLQGBERTATTGKEKAVPTTGKAKYLGNNWVGVI----TGAGTGKSF 600
Db 243 EYLKFGELSGVTSNSVFLQGBERTVTTGKAVPTTGTAKYLGNNWVGVIAGKDTGAGSSKGF 302

Qy 601 NEAQDIADFDIDPERKSVKGLITQGRTDPVFNIGETAGNWTGKASTTKADAGGYKID 660
Db 303 TDAKDVADEFDIDPEKTVNGKLITQGRQDPVFNITGQIAGNWTGTASTAKANAGGYNID 362

Qy 661 -SSSTGKSIVIENAEVTCGGYPGNANEMGGSFTHDTDSDKASVVFGTKRQOEVK 713
Db 363 SSSSTNKSIVIKDAEVTGCGYPGNANEMGGSFTHNADDSKVSUVFGTKK--QEVK 415

RESULT 19
US-08-613-009A-20
; Sequence 20, Application US/08613009A
; Patent No. 6090576
; GENERAL INFORMATION:
; APPLICANT: Myers, Lisa E
; APPLICANT: Schryvers, Anthony B
; APPLICANT: Harkeess, Robin E
; APPLICANT: Loosmore, Sheena M.
; APPLICANT: Du, Run-Pan
; APPLICANT: Yang, Yan-Ping
; APPLICANT: Klein, Michel H
; TITLE OF INVENTION: Transferrin Receptor Genes of Moraxella
; NUMBER OF SEQUENCES: 31
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Sim & McBurney
; STREET: 6th Floor, 330 University Avenue

```


QY 380 EADHGNRFRGSATASDKTQHPFTSDATNKLGGFYGPKGEELAGKFLTDDNKLK 439
Db 282 QATLHGNRFRGKALADKGA-TNGSHPFISD-SLSLEGGFYGPKGEELAGKFLSNDNKA 339
QY 440 GVFGAK-RDKVE-----KTEALIDAYALGTFNNTKATTTFTPTKKQLDNFGNAKLV 491
Db 340 AVFGAKQKDKKGENAAGPATETVIDAYRI-----TGEFFKKEQIDSGDVKLL 389
QY 492 LGSTVINLVSATDKNVEFTKFTKDKPYSATNKAGETLMVNDVIVKTYGNFYLKPG 551
Db 390 VDGVELSLPSEGNAKFAFHEIQ-----NGVKATVCCS-----NLDYMSFGK 432
QY 552 LSVGDHSVFLQGERATTTGKAVPTTGKAYLGNWVGYITGAGTKS-----FNEAQD 605
Db 433 LSKENKDDMFLOGVTRTPVS-DVAARTENAKYRTWYGYIAN-GTWSGSEASNOFTEGGN 490
QY 606 IADFDIDFERKSVKGLTTOGRTPVFNIGKAGNWTGKASTTKADAGKYKIDSSSTG 665
Db 491 RAEFDVDFSTKISGTLTAKORTSPAPTITAMIKDNGFSGVAKTGE---NGFALDPQNTG 547
QY 666 KSVIE-NAEVTGGFYGNANEMGGSFTH-----DTDDSKASVVFGTKRQOEK 713
Db 548 NSHYTHIEATVSGFYGNKNAIEMGGSFSPGNAPEGKQEKASVVFGAKRQOLVQ 601

RESULT 21

US-09-059-584-26
; Sequence 26, Application US/09059584
; Patent No. 6440701
; GENERAL INFORMATION:
; APPLICANT: Myers, Lisa E
; APPLICANT: Schryvers, Anthony B
; APPLICANT: Harkness, Robin E
; APPLICANT: Loosmore, Sheena M.
; APPLICANT: Du, Run-Pan
; APPLICANT: Yang, Yan-Ping
; APPLICANT: Klein, Michel H
; TITLE OF INVENTION: Transferrin Receptor Genes of Moraxella
; NUMBER OF SEQUENCES: 60
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Sim & McBurney
; STREET: 6th Floor, 330 University Avenue
; CITY: Toronto
; STATE: Ontario
; COUNTRY: Canada
; ZIP: M5G 1R7
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patent in Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/09/059,584
; FILING DATE: 14-APR-1998
; CLASSIFICATION:
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/778,570
; FILING DATE: 03-JAN-1997
; CLASSIFICATION:
; ATTORNEY/AGENT INFORMATION:
; NAME: Stewart, Michael I
; REGISTRATION NUMBER: 24973
; REFERENCE/DOCKET NUMBER: 1038-794
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (416) 595-1155
; TELEFAX: (416) 595-1163
; INFORMATION FOR SEQ ID NO: 26:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 601 amino acids
; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; US-09-059-584-26

Query Match 22.8%; Score 845.5; DB 4; Length 601;
Best Local Similarity 35.0%; Pred. No. 1.2e-49;
Matches 229; Conservative 100; Mismatches 202; Indels 123; Gaps 25;
QY 89 EPKYQDVPTDKNEKEQVSSIQEPAMGVAMELKLNAHPLNPKNKEAEKRI-ALDOKDLV 147
Db 42 KPKYEDSKSPESQODVSENSGAAYGFAVKLPRNAH-FNP-KYKEKHKPLGSDWKQLQ 99
QY 148 AVEGDLNIPDKNLIEYLKKSSEW-SKFEAQKGGIENNTLTHKOLSSSQEAKVKEA 206
Db 100 RGE---FNSFSERDELEKRGSSSELIESKWDGQSRVGVYNTFT----- 140
QY 207 LDNALTOFAOEKYKELIENAHDKSDARNRDLVYVKSFPNLSGYTATDHDKTN--YRG 264
Db 141 -----YVRSYVYLN---KNNIDIKNNIVLFG 164
QY 265 YYGALYYKGSSETAKELPQTSKAYKYWDFTDADLNDKNTDLPGIARQTQWRSVLSTDEY 324
Db 165 PDGVLYYKGPSEKLPSEKITYKTYWDYVDAWEKQRFEGLSAAGDGSALALEE- 223
QY 325 ATLLTDKNNKPSDYNGAYGHSBFDVNFADKIKGKLI-SNQLSGTAVTAKE-----RYKI 379
Db 224 -GVLRNQAESSGHTD-FGMTSEFVDFSDKTIKGLYRNNRITQNNSENKQIKTYTI 281
QY 380 EADHGNRFRGSATASDKTQHPFTSDATNKLGGFYGPKGEELAGKFLTDDNKLK 439
Db 282 QATLHGNRFRGKALADKGA-TNGSHPFISD-SLSLEGGFYGPKGEELAGKFLSNDNKA 339
QY 440 GVFGAK-RDKVE-----KTEALIDAYALGTFNNTKATTTFTPTKKQLDNFGNAKLV 491
Db 340 AVFGAKQKDKKGENAAGPATETVIDAYRI-----TGEFFKKEQIDSGDVKLL 389
QY 492 LGSTVINLVSATDKNVEFTKFTKDKPYSATNKAGETLMVNDVIVKTYGNFYLKPG 551
Db 390 VDGVELSLPSEGNAKFAFHEIQ-----NGVKATVCCS-----NLDYMSFGK 432
QY 552 LSVGDHSVFLQGERATTTGKAVPTTGKAYLGNWVGYITGAGTKS-----FNEAQD 605
Db 433 LSKENKDDMFLOGVTRTPVS-DVAARTENAKYRTWYGYIAN-GTWSGSEASNOFTEGGN 490
QY 606 IADFDIDFERKSVKGLTTOGRTPVFNIGKAGNWTGKASTTKADAGKYKIDSSSTG 665
Db 491 RAEFDVDFSTKISGTLTAKORTSPAPTITAMIKDNGFSGVAKTGE---NGFALDPQNTG 547
QY 666 KSVIE-NAEVTGGFYGNANEMGGSFTH-----DTDDSKASVVFGTKRQOEK 713
Db 548 NSHYTHIEATVSGFYGNKNAIEMGGSFSPGNAPEGKQEKASVVFGAKRQOLVQ 601

RESULT 22

US-08-448-194-2
; Sequence 2, Application US/08448194
; Patent No. 6028049
; GENERAL INFORMATION:
; APPLICANT: Jacobs, Eric
; APPLICANT: LEGRAN, Michele
; APPLICANT: MAZARIN, Veronique
; APPLICANT: BOUCHON-THEISEN, Bernadette
; APPLICANT: SCHRYVERS, Anthony B.
; APPLICANT: BLOCH, Marie-Aline
; TITLE OF INVENTION: DNA FRAGMENTS CODING FOR THE TRANSFERRIN
; RECEPTOR OF NEISSERIA MENINGITIDIS
; NUMBER OF SEQUENCES: 62
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Burns, Doane, Swecker & Mathis
; STREET: P.O. Box 1404
; CITY: Alexandria
; STATE: Virginia
; COUNTRY: United States
; ZIP: 22313-1404
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk


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Qy 148 AVEGDLTNPDKNLIYLLKSSSEVV-SKFEAQKGGIENNTLTHKDLSSQKAEKAKVEA 206
Db 100 RGE---PNSFSEDELEKKGSSSELIESKWEDGQSRVVGYNFT-----140
Qy 207 LDNALTPAQAEKYKELIENAHDKKSDARNRDLVYKSGFNYLSGYTATDHDKKN--YRG 264
Db 141 -----YVRSQGVYVLN---KNNDIKNNVILFG 164
Qy 265 YGALYKSGSETAKELPOTSAYKGYWDFMTDNLNKYDLPGLTQRTQWRSVSTDEY 324
Db 165 PDGYLYYKSGFSEKELPEKTIYKGTWYVTDAMEKQFEGLSAAGGDKSGALSALBE- 223
Qy 325 ATLLTDKNNKPSDYNGAYGHSSEFVNADKKIKGKLI-SNOLSGTAVTAKE---RYKI 379
Db 224 -GVLRNQAESSGHTD-FGMTSEFEVDFSDKTIKGLTYRNNRITQNNSENKQIKTRYTI 281
Qy 380 EADHGNRFRGSATASDKAEDSKTQHPFTSDATNKLGGFYPGPKGEEELAGKFLTDNKL 439
Db 282 QATLHGNRFRGKALAADKGA-TNGSHPFISD-SDSLEGGFYGPKEELAGKFLSNDKVA 339
Qy 440 GVFGAK-RDKVEKTEA-----ILDAYALGTFNNNTKATFTPTTKQLDNFGNAKVL 492
Db 340 AVFGAKQKDKKDGNAAGPATETVIDAYRI-----TGEEFKKEQIDSGDVKKLL 389
Qy 492 LGSTVINLVSTDATKNEFTKKFTKDKPTSATNKAGETILMVNDEVIVKTYGKNEFVYLK 551
Db 390 VDGVELSLPSEGNAAFQHEIEQ-----NGVKATVCCS-----NLDYMSFGK 432
Qy 552 LSVGDSHVSFLQERTATTGKAVPTTGKAKYLGWVGYITG--AGTGKSFN-EAQDIAD 608
Db 433 LSKENKDDMFQGVVTPVS-DVAARTEANAKYRGTYGYIANGTWSGEASNQEGGNRAE 491
Qy 609 FDIIFERSVKGLTQRTQRTDPVFNKGEIAGNCHWTGKASTTKADAGYKIDSSSTGSKI 668
Db 492 FDVDFSTKKISGTLTAKORTSPAFTITAMIKONGPSGVAKTGE---NGFALDPQNTGSH 548
Qy 669 VIE-NAEVTGGFYGNANEMGSGFTH-----DTDDSKASVVRGTRKQOEK 713
Db 549 YTHIATVSGGFYGNALTEMGSGSFPGNAPEGKQEKASVVRGAKRQQLVQ 599

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RESULT 24

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; US-08-487-890A-97
; Sequence 97, Application US/08487890A
; Patent No. 5708149
; GENERAL INFORMATION:
; APPLICANT: Loosmore, Sheena
; APPLICANT: Harkness, Robin
; APPLICANT: Schryvers, Anthony
; APPLICANT: Chong, Fele
; APPLICANT: Gray-Owen, Scott
; APPLICANT: Yang, Yan-ping
; APPLICANT: Mardin, Andrew
; APPLICANT: Klein, Michel
; TITLE OF INVENTION: Transferrin Receptor Genes
; NUMBER OF SEQUENCES: 147
; CORRESPONDENCE ADDRESS:
; STREET: 6th Floor, 330 University Avenue
; CITY: Toronto
; STATE: Ontario
; COUNTRY: Canada
; ZIP: M5G 1R7
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patent In Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/487,890A
; FILING DATE: 07-JUN-1993
; CLASSIFICATION: 435
; PRIOR APPLICATION DATA:

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; APPLICATION NUMBER: US 08/175,116
; FILING DATE: 29-DEC-1993
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/148,968
; FILING DATE: 08-NOV-1993
; ATTORNEY/AGENT INFORMATION:
; NAME: Stewart, Michael I
; REGISTRATION NUMBER: 24,973
; REFERENCE/DOCKET NUMBER: 1038-466 MIS:jb
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (416) 595-1155
; TELEFAX: (416) 595-1163
; INFORMATION FOR SEQ ID NO: 97:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 598 amino acids
; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; US-08-487-890A-97

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Query Match 22.4%; Score 834; DB 1; Length 598;
Best Local Similarity 34.8%; Pred. No. 7.6e-49;
Matches 226; Conservative 104; Mismatches 202; Indels 118; Gaps 25;

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Qy 89 EPKYQDYPTDKNEKEQVSSIOEPWAGYAMELKLRNAHPLNPKNKEAKRI-ALDOQDLV 147
Db 42 KPKYDESKQSPESQODVSENGAAYGFAVLPFRNAH-FNP-KYKRRKHPLGSDMDKQLQ 99
Qy 148 AVEGDLTNPDKNLIYLLKSSSEVV-SKFEAQKGGIENNTLTHKDLSSQKAEKAKVEA 206
Db 100 RGE---PNSFSEDELEKKGSSSELIESKWEDGQSRVVGYNFT-----140
Qy 207 LDNALTPAQAEKYKELIENAHDKKSDARNRDLVYKSGFNYLSGYTATDHDKKN--YRG 264
Db 141 -----YVRSQGVYVLN---KNNDIKNNVILFG 164
Qy 265 YGALYKSGSETAKELPOTSAYKGYWDFMTDNLNKYDLPGLTQRTQWRSVSTDEY 324
Db 165 PDGYLYYKSGFSEKELPEKTIYKGTWYVTDAMEKQFEGLSAAGGDKSGALSALBE- 223
Qy 325 ATLLTDKNNKPSDYNGAYGHSSEFVNADKKIKGKLI-SNOLSGTAVTAKE---RYKI 379
Db 224 -GVLRNQAESSGHTD-FGMTSEFEVDFSDKTIKGLTYRNNRITQNNSENKQIKTRYTI 281
Qy 380 EADHGNRFRGSATASDKAEDSKTQHPFTSDATNKLGGFYPGPKGEEELAGKFLTDNKL 439
Db 282 QATLHGNRFRGKALAADKGA-TNGSHPFISD-SDSLEGGFYGPKEELAGKFLSNDKVA 339
Qy 440 GVFGAK-RDKVEKTEA-----ILDAYALGTFNNNTKATFTPTTKQLDNFGNAKVL 492
Db 340 AVFGAKQKDKKDGNAAGPATETVIDAYRI-----TGEEFKKEQIDSGDVKKLL 389
Qy 492 LGSTVINLVSTDATKNEFTKKFTKDKPTSATNKAGETILMVNDEVIVKTYGKNEFVYLK 551
Db 390 VDGVELSLPSEGNAAFQHEIEQ-----NGVKATVCCS-----NLDYMSFGK 432
Qy 552 LSVGDSHVSFLQERTATTGKAVPTTGKAKYLGWVGYITG--AGTGKSFN-EAQDIAD 609
Db 433 LSKENKDDMFQGVVTPVS-DVAARTEANAKYRGTYGYIANGTWSGEASNQEGGNRAE 491
Qy 609 FDIIFERSVKGLTQRTQRTDPVFNKGEIAGNCHWTGKASTTKADAGYKIDSSSTGSKI 669
Db 492 FDVDFSTKKISGTLTAKORTSPAFTITAMIKONGPSGVAKTGE---NGFALDPQNTGSH 548
Qy 670 IE-NAEVTGGFYGNANEMGSGFTH-----DTDDSKASVVRGTRKQOEK 713
Db 549 YTHIATVSGGFYGNALTEMGSGSFPGNAPEGKQEKASVVRGAKRQQLVQ 598

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RESULT 25

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; US-08-478-435-97
; Sequence 97, Application US/08478435
; Patent No. 5922323

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[illegible]

Qy	265	YIGALYIKYSEVAKELPQTSAKYIGYWDFFMDALDWNKYIYDLPGLAKQIKWKSLSVSDIEY	3223
Db	165	PDGYLYKKGPEKSELPSEKITTYKGTWYDYYTDAMEKQRFEGLSAAGDGSGALSALSEE-	223
Qy	325	ATILLDKNNKPSDVNGAYGHSSSEFDVNFADKKLIKGLI-SNOLSGTAVTAKE----	379
Db	224	-GVIRNOQEAESSGHTD-FGMISEFEVDPSDKITKGLTYRNNRIITQNNSENKQIKTTRYI	281
Qy	380	EADIHGNNRFRGSATADKAEDSKTQHPTSDATNKLGGFVPGKEELAGKFLTDNDKLF	439
Db	282	QATLHGNNRFGKALAADKGA-TNGSHPEFISD-SDSLEGGFVPGKEELAGKFLSNDNKVA	339
Qy	440	GVEGAK-RDQVEKTEA-----ILDAYALGTFNNTNKATFTPTTKKOLDNFGNAKKLVL	492
Db	340	AVFGAKQKQKQGENAAGPATVEIDATRI-----TGEEFKKGQIDSGDVKKULV	389
Qy	493	GSTVINLVSVDATKNIEPTKFTKDKPTSATNKAGETLWNVNDEVIVKTYGKNFYLKFGEL	552
Db	390	DGVELSLLPSEGNKAAAFQHEIQ-----NGVKATVCCS-----NLDYMSFCKL	432
Qy	553	SVGDSHSVFLQGETATTGKAPVTTCKAKYLGWNWGYITG--AGTGKSFN-EAQDIADF	609
Db	433	SKENKODMFLQGYRTPVS-DVAARTEANAKYRGTYWGYIANGTSMGSEASNOEGNRAEF	491


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US-08-897-438-97
; Sequence 97, Application US/08897438
; Patent No. 6262016
; GENERAL INFORMATION:
; APPLICANT: Loosmore, Sheena
; APPLICANT: Harkness, Robin
; APPLICANT: Schryvers, Anthony
; APPLICANT: Chong, Pele
; APPLICANT: Gray-Owen, Scott
; APPLICANT: Yang, Yan-Ping
; APPLICANT: Murdin, Andrew
; APPLICANT: Klein, Michel
; TITLE OF INVENTION: Transferrin Receptor Genes
; NUMBER OF SEQUENCES: 160
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Sim & McBurney
; STREET: 6th Floor, 330 University Avenue
; CITY: Toronto
; STATE: Ontario
; COUNTRY: Canada
; ZIP: M5G 1R7
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/897,438
; FILING DATE:
; CLASSIFICATION: 435
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/483,577
; FILING DATE: 07-JUN-1995
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/337,483
; FILING DATE: 08-NOV-1994
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/175,116
; FILING DATE: 29-DEC-1993
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/148,968
; FILING DATE: 08-NOV-1993
; ATTORNEY/AGENT INFORMATION:
; NAME: Stewart, Michael I
; REGISTRATION NUMBER: 24,973
; REFERENCE/DOCKET NUMBER: 1038-720
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (416) 595-1155
; TELEFAX: (416) 595-1163
; INFORMATION FOR SEQ ID NO: 97:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 598 amino acids
; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; US-08-897-438-97

Query Match      22.4%; Score 834; DB 3; L
Best Local Similarity 34.8%; Pred. No. 7.6e-49;
Matches 226; Conservative 104; Mismatches 202;

Qy      89 EPKYQDVPTDKNEKEQVSSIQBPAGCYAMELKLRNAHPLN
Db      42 KPKYDEKSPQSPQDVSENSSAAVGFAYKLPRNAH-FN

Qy      148 AVEGDLTNIPFQKNLIEYLKKSSEVV-SKFEAQKGGIENNN
Db      100 RGE---PNSFSERDELEKKRGSELIESKWDQGSRVVGY

Qy      207 LONALTFQAEKYKELIENAHDKKSDARNRDLEYVYKSGFN
Db      141 -----YVRSGYV

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Qy		265	YYGALYYKSETAKELPOTSXKYGYWDPMTDATLDMKYITDLPGIARQTOWRSLVSTDEY	324
Db		165	PDGYIYYGKEPSKELPELTIIII:::IIII:::IIII:::IIII:::IIII:::	223
Qy		325	ATLLDDKNKPBDYNGAYGHGSEFDPVPADKKIKGLI-SNQLSGTAVTAKE----	379
Db		224	-GVLRNQAEASSGHTD-FGMTISEFVDFSDKTIGTLRYNNRTIONSENKOIKTRYVI	281
Qy		380	EADIHGNPRGSATASDKAEDSKTOHPPTSDATNKLEGGFYGPKGBELAGKFUTDDNKLF	439
Db		282	QATLHGMRPKGALAADKGA-TNGSHPIFD-SDSLEGGFYGPKGBELAGKFULSNDNKVA	339
Qy		440	GVGFAK-RDKVEKTEA-----ILDAYALGTFFNNNTKATTFPTFKQLDNFCNAKLVL	492
Db		340	AVFGAKQDKDKDGENAAGPATVIDAYI-----TGEBFEKQEIDSPGDVKKLIV	389
Qy		493	GSTVINLVSDATKNFEFTKKTOKPTSATNKAGETILMWDEIVIKTYGKNFEYLAFGBEL	552
Db		390	DGVLSLLPLPSEGNAKAFOHEIEQ-----NGVKATVCCS-----NLDYMSFGKL	432
Qy		553	SVGDSHSVFLQERTATTGEKAVPTTGAKYLGWNWGYITG--AGTKGKSPN-EAQDIAP	609
Db		433	SKENKDDMFLQEVTRTPVS-DVAARTKANAKYRGTWGYIANGTSWSGEASNQBGGNRAEF	491
Qy		610	DIDFERKSVKGLTIQGRTRDPVFMIKGBIAGNGWTGKASTTKADAGCYIKIDSSTGKSTV	669
Db		492	DVDVFSTKKISGTLTAKORTSPAFTIAMIKONGFSGVAKTCB---NGFALDPONTGNSHY	548
Qy		670	IE-NAEVTGGFYPNPANEMGSGPTH-----DTDOSKASVVFGTKROQEVK	713
Db		549	THIEATVSGGFYGKNAIEMGSGFPFNAPBGKOEKASVVFGAKRQOLVC	598

RESULT 31

US-08-637-654-97
Sequence 97, Application US/08637654
Patent No. 6358727
GENERAL INFORMATION:
APPLICANT: Loosmore, Sheena M
APPLICANT: Harkness, Robin E
APPLICANT: Schryvers, Anthony B
APPLICANT: Chong, Pele
APPLICANT: Gray-Owen, Scott
APPLICANT: Yang, Yan-Ping
APPLICANT: Murdin, Andrew D
APPLICANT: Klein, Michel H
TITLE OF INVENTION: HAEMOPHILUS TRANSFERRIN RECEPTOR GENES
NUMBER OF SEQUENCES: 147
CORRESPONDENCE ADDRESS:
ADDRESSEE: Sim & McBurney
STREET: 6th Floor, 330 University Avenue
CITY: Toronto
STATE: Ontario
COUNTRY: Canada
ZIP: M5G 1R7
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patent In Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/637,654
FILING DATE: 05-AUG-1996
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: PCT/CA94/00616
FILING DATE:
ATTORNEY/AGENT INFORMATION:
NAME: Stewart, Michael I
REGISTRATION NUMBER: 24,973
REFERENCE/DOCKET NUMBER: 1038-595
TELECOMMUNICATION INFORMATION:
TELEPHONE: (416) 595-1155

[illegible]

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RESULT 32
US-08-649-518-97
; Sequence 97, Application US/08649518
; Patent No. 6361779
; GENERAL INFORMATION:
; APPLICANT: Loosmore, Sheena
; APPLICANT: Harkness, Robin
; APPLICANT: Schryvers, Anthony
; APPLICANT: Chong, Pele
; APPLICANT: Gray-Owen, Scott
; APPLICANT: Yang, Yan-ping
; APPLICANT: Murdin, Andrew
; APPLICANT: Klein, Michel
; TITLE OF INVENTION: Transferrin Receptor Genes
; NUMBER OF SEQUENCES: 160

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Query Match      22.3%; Score 828; DB 3; Length 578;
Best Local Similarity 35.0%; Pred. No. 1.9e-48;
Matches 228; Conservative 100; Mismatches 202; Indels 122; Gaps 26;

Qy 89 EPKYQDVPTDNEKEQVSIQEPAMGYAMELKLNHAHPLNPNKNKEAEKRI-ALDQKDLV 147
Db 22 KPKYEDEKSPQESQDDVSENGAAYGFAVKLPRNAH-FNP-KYKEKHKPLGSDWKQLQ 79

Qy 148 AVEGDLTNI PDKNLI EYLKSSSEVW-SKPEAQGGIENNTRLTHKOLSSSQEAKVKEA 206
Db 80 RGE---PNSFSEDELEKKGSSSELIESKWDGQSRVVGYNFT-----120

Qy 207 LDNALTOFAOEKYKELIENAHDKKSDARNRDLEVYKSGFNLYSGYTATDHDKKTN--YRG 264
Db 121 -----YVRSGVVYLN---KNNIDIKNNIVLFG 144

Qy 265 YYGALYKYGSTAKELPOTS AKYGYWDFMTDTATLDNKYTDLPGIARQOTWRSVLSTDEY 324
Db 145 PDGILYKKGKPEPSKELPSEKITTKGTWDTVDAMEKQRFEG--GSAAGGDKSGALSAL 202

Qy 325 ATLLTDKNN-KPSDNGAYGHSSEFDVNFADKKIKGLI-SNQLSGTAVTAKE-----RYK 378
Db 203 GVL---RNOAEASSGHTDFGMSBFEVDFDKTIKGLYRNRRITQNNSENKQIKTTRYT 259

Qy 379 IEADHGNRFRGSATASDKAEDSKTQHPFTSDATNKLKLEGGFYGPKGBELAGKFLTDNKL 438
Db 260 IQATLHGNRFPKALADKGA-TNGSHPPFISD-SDSLEGGFYGPKGBELAGKFLSNDKV 317

Qy 439 FGVEGAK-RDKVE-----KTEAILDAYALGTFTNNTNKATFTPTFKQLDNFGNAK 490
Db 318 AAVFGAKQKDKKDGNAAGPATETVIDAYRI-----TGBEFKKEQIDSGDVKKL 367

Qy 491 VLGSVTINLSTDATKNEFTKFKDKPTSATNKAGETLMVNDDEVIVKTYGKFEYLKFG 550
Db 368 LVGVELSLLPSEGNKAAFOHEIEQ-----NGVKATVCCS-----NLDYMSFG 410

Qy 551 ELSVGDSHVSFLOGERTATTGKAVPTTGKAKYLGNNVVGITG--AGTGKSFN-EAODIA 607
Db 411 KLSKENDDMFLOGVTRPVLS-DVAARTEANAKYGTWGYIANGTSVSGEASNOEGNRA 469

Qy 608 DFDIDFERKSVKGLTTQGRTPVFNIKGEIAGNGWTGKASTTKADAGGYKIDSSSTGKS 667
Db 470 EFDVDFSTKISGTLTAKDRTPAFTITAMIKDNGFSGVAKTGB---NGPALDPQNTGNS 526

Qy 668 IVIE-NAEVTGCGFYGPANEMGSGSFTH-----DTDDSKASVVGTKRQOEYK 713
Db 527 HYTHIEATVSGGYGKNAIEMGGSFSPGNAPGKQEKASVYVFGAKRQLQVQ 578
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RESULT 34

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US-08-867-921-61
; Sequence 61, Application US/08867921
; Patent No. 6326350
; GENERAL INFORMATION:
; APPLICANT: JACOBS, Eric
; APPLICANT: LEGRAIN, Michele
; APPLICANT: MAZARIN, Veronique
; APPLICANT: BOUCHON-THEISEN, Bernadette
; APPLICANT: SCHRYVERS, Anthony B.
; APPLICANT: BLOCH, Marie-Aline
; TITLE OF INVENTION: DNA FRAGMENTS CODING FOR THE TRANSFERRIN
; RECEPTOR OF NEISSERIA MENINGITIDIS
; NUMBER OF SEQUENCES: 82
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: BURNS, DOANE, SWECKER & MATHIS
; STREET: P.O. Box 1404
; CITY: Alexandria
; STATE: VA
; COUNTRY: USA
; ZIP: 22313-1404
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
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; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.25
; CURRENT APPLICATION DATA: US/08/867,921
; APPLICATION NUMBER: US/08/867,921
; FILING DATE: 03-JUN-1997
; CLASSIFICATION: 435
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/445,472
; FILING DATE: 22-MAY-1995
; APPLICATION NUMBER: US 08/361,469
; FILING DATE: 22-DEC-1994
; CLASSIFICATION: 435
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/078,053
; FILING DATE: 18-JUN-1993
; CLASSIFICATION: 435
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: FR 92 07493
; FILING DATE: 19-JUN-1992
; ATTORNEY/AGENT INFORMATION:
; NAME: McGowan, Malcolm K.
; REGISTRATION NUMBER: 39,300
; REFERENCE/DOCKET NUMBER: 016100-004
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (703) 836-6620
; TELEFAX: (703) 836-2021
; INFORMATION FOR SEQ ID NO: 61:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 578 amino acids
; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; MOLECULE TYPE: DNA (genomic)
; US-08-867-921-61
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```
Query Match      22.3%; Score 828; DB 3; Length 578;
Best Local Similarity 35.0%; Pred. No. 1.9e-48;
Matches 228; Conservative 100; Mismatches 202; Indels 122; Gaps 26;

Qy 89 EPKYQDVPTDNEKEQVSIQEPAMGYAMELKLNHAHPLNPNKNKEAEKRI-ALDQKDLV 147
Db 22 KPKYEDEKSPQESQDDVSENGAAYGFAVKLPRNAH-FNP-KYKEKHKPLGSDWKQLQ 79

Qy 148 AVEGDLTNI PDKNLI EYLKSSSEVW-SKPEAQGGIENNTRLTHKOLSSSQEAKVKEA 206
Db 80 RGE---PNSFSEDELEKKGSSSELIESKWDGQSRVVGYNFT-----120

Qy 207 LDNALTOFAOEKYKELIENAHDKKSDARNRDLEVYKSGFNLYSGYTATDHDKKTN--YRG 264
Db 121 -----YVRSGVVYLN---KNNIDIKNNIVLFG 144

Qy 265 YYGALYKYGSTAKELPOTS AKYGYWDFMTDTATLDNKYTDLPGIARQOTWRSVLSTDEY 324
Db 145 PDGILYKKGKPEPSKELPSEKITTKGTWDTVDAMEKQRFEG--GSAAGGDKSGALSAL 202

Qy 325 ATLLTDKNN-KPSDNGAYGHSSEFDVNFADKKIKGLI-SNQLSGTAVTAKE-----RYK 378
Db 203 GVL---RNOAEASSGHTDFGMSBFEVDFDKTIKGLYRNRRITQNNSENKQIKTTRYT 259

Qy 379 IEADHGNRFRGSATASDKAEDSKTQHPFTSDATNKLKLEGGFYGPKGBELAGKFLTDNKL 438
Db 260 IQATLHGNRFPKALADKGA-TNGSHPPFISD-SDSLEGGFYGPKGBELAGKFLSNDKV 317

Qy 439 FGVEGAK-RDKVE-----KTEAILDAYALGTFTNNTNKATFTPTFKQLDNFGNAK 490
Db 318 AAVFGAKQKDKKDGNAAGPATETVIDAYRI-----TGBEFKKEQIDSGDVKKL 367

Qy 491 VLGSVTINLSTDATKNEFTKFKDKPTSATNKAGETLMVNDDEVIVKTYGKFEYLKFG 550
Db 368 LVGVELSLLPSEGNKAAFOHEIEQ-----NGVKATVCCS-----NLDYMSFG 410

Qy 551 ELSVGDSHVSFLOGERTATTGKAVPTTGKAKYLGNNVVGITG--AGTGKSFN-EAODIA 607
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Db 411 KLSKENDDMFQVGRTPVS-DVAARTEANAKYRGTWGYIANGTSMGSEASQEGNRA 469
Qy 608 DFDDFERKSVKGLITQGRTPVFNKGEIAGNGWTGKASTTKADAGGYKIDSSSTGKS 667
Db 470 EFDVDFETKISGLTAKDRTPSPFTITAMIKDNGFSGVAKTGE---NGFALDPQNTGNS 526
Qy 668 IVIE-NAEVTGGFYGPANEMGGSFTH-----DTDDSKASVVFGRKQOEYK 713
Db 527 YTHIEATVSGFYGKNAIEMGGSFSPGNAPEGKQEKASVVFGRKQOQLVQ 578

RESULT 35

US-08-064-174-1
; Sequence 1, Application US/08064174
; Patent No. 5618540
; GENERAL INFORMATION:
; APPLICANT: QUENTIN-MILLET, Marie-Jose
; APPLICANT: LISSOLO, Ling
; TITLE OF INVENTION: SUBUNIT VACCINE FOR NEISSERIA
; TITLE OF INVENTION: MENINGITIDIS INFECTIONS AND CORRESPONDING PURIFIED
; TITLE OF INVENTION: SUBUNITS
; NUMBER OF SEQUENCES: 2
; CORRESPONDENCE ADDRESS:
; ADDRESS: BURNS, DOANE, SWECKER & MATHIS
; STREET: George Mason Bldg., Washington & Prince Sts.
; CITY: Alexandria
; STATE: Virginia
; COUNTRY: United States
; ZIP: 22313-1404
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patent In Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/064.174
; FILING DATE: 25-MAY-1993
; CLASSIFICATION: 424
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: FR 91 12176
; FILING DATE: 03-OCT-1991
; ATTORNEY/AGENT INFORMATION:
; NAME: Rea, Teresa Stanek
; REGISTRATION NUMBER: 30,427
; REFERENCE/DOCKET NUMBER: 016100-001
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 703/836-6620
; TELEFAX: 703/836-2021
; INFORMATION FOR SEQ ID NO: 1:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 579 amino acids
; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; MOLECULE TYPE: peptide
; US-08-064-174-1

Query Match 22.2%; Score 824.5; DB 1; Length 579;
Best Local Similarity 34.6%; Pred. No. 3.2e-48;
Matches 225; Conservative 105; Mismatches 202; Indels 119; Gaps 25;

Qy 89 EPKYQDVPTDKNEKEQVSSIOEPAMGYAMELKLRLNAHPLNPNKNKEAPKRI-ALDQKDLV 147
Db 22 KPYDEKESQESQDDVSNSGAAYGFAVKLPRENAH-FNP-KYKHKPLGSDMKKIQ 79
Qy 148 AVEGDLTNIPDKNLIIEVLKKSSEVV-SKFPAGKGGIENNTLRLTHKOLSSSEKQEAUYKEA 206
Db 80 RGE---PNSFSERDELEKRGSSSELIESKWDGSGRVVGYTNFT-----120
Qy 207 LDNALTQPAQEKYKELIENAHDKSDARNRDLVYKSGFNYLSGYTATDHDKKTN--YRG 264
Db 121 -----YRSGYVYLN---KXNIDIKNNIVLFG 144

Qy 265 YYGALYYKSETAKELPQTSKAYKYGDWFMTDATLDNKYITDLPGARQOTWRSLVSTDEY 324
Db 145 PDGLYYKGEKPESEKITYGTWYVTDAMEKORFEGLSAAGDGKSGALSALSEE- 203
Qy 325 ATLLTDKNNKPSDYGAYGHSSEFDVNFADKIKGKLI-SNQLSGTAVAKE----RYKI 379
Db 204 -GVLRNQAESSGHTD-FGWTSEFEVDFSDKTIKGTLYRNRIITONNSENKQIKTRTYI 261
Qy 380 EADIHGNRFRGSATASKAEDSKTQHPFTSDATNKLGGFYGPXGEBELAGFLDNDKLF 439
Db 262 QATLHGNRFRKGKALADKGA-TNGSHPFISD-SDSLEGGFYGPKEELAGFLSNDNKVA 319
Qy 440 GVFGAK-RDKVE-----KTEALLDAVALGTFNNTNKATFTTPTKOLDNFGNAKLV 491
Db 320 AVFGAKOKDKKGENAAGPATETVIDAYRI-----TGEEFKKEQIDSFQDVKLL 369
Qy 492 LGSTVINLSTDATKNEFTKTKDKPTSATNKAGETLMVNDEIVIVTKYGNFYLFKFE 551
Db 370 VDGVELSLLPSEGNKAQFQHEIQ-----NGVKATVCCS-----NLDYMSFGK 412
Qy 552 LSVGDSHVSFLQERTATTGKAVPTTGKAKYLGNNWVGYITG--AGTKSPN-BAQDIAD 608
Db 413 LSKENKDDMFQVGRTPVS-DVAARTEAKYRGTTGTYGIANGTSMGSEASQEGNRAE 471
Qy 609 FDDFERKSVKGLITQGRTPVFNKGEIAGNGWTGKASTTKADAGGYKIDSSSTGKSI 668
Db 472 FDDVDFETKISGLTAKDRTPSPFTITAMIKDNGFSGVAKTGE---NGFALDPQNTGNSH 528
Qy 669 VIE-NAEVTGGFYGPANEMGGSFTH-----DTDDSKASVVFGRKQOEYK 713
Db 529 YTHIEATVSGFYGKNAIEMGGSFSPGNAPEGKQEKASVVFGRKQOQLVQ 579

RESULT 36

US-08-066-167-1
; Sequence 1, Application US/08066167
; Patent No. 5618541
; GENERAL INFORMATION:
; APPLICANT: QUENTIN-MILLET, Marie-Jose
; TITLE OF INVENTION: VACCINE AGAINST NEISSERIA MENINGITIDIS
; TITLE OF INVENTION: INFECTIONS
; NUMBER OF SEQUENCES: 4
; CORRESPONDENCE ADDRESS:
; ADDRESS: BURNS, DOANE, SWECKER & MATHIS
; STREET: George Mason Bldg., Washington & Prince Sts.
; CITY: Alexandria
; STATE: Virginia
; COUNTRY: United States
; ZIP: 22313-1404
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patent In Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/066.167
; FILING DATE: 02-JUN-1993
; CLASSIFICATION: 424
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: FR 91 12177
; FILING DATE: 03-OCT-1991
; ATTORNEY/AGENT INFORMATION:
; NAME: Crane-Feury, Sharon E
; REGISTRATION NUMBER: 36,113
; REFERENCE/DOCKET NUMBER: 016100-002
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (703) 836-6620
; TELEFAX: (703) 836-2021
; INFORMATION FOR SEQ ID NO: 1:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 579 amino acids
; TYPE: amino acid

Db 472 FDVDFSTKISCTLTAKORTSPAFITAMIKDNGFSGVAKTGE---NGFALDPQNTGNSH 528
Qy 669 VIE-NAEVTGGFYGNANEMGGSFTH-----DTDDSKASVVFVGTGKQOEVK 713
Db 529 YTHIATVSGGFYGNANEMGGSFTH-----DTDDSKASVVFVGTGKQOEVK 713
RESULT 38
US-09-405-728-3
; Sequence 3, Application US/09405728
; Patent No. 6391316
; GENERAL INFORMATION:
; APPLICANT: Potter, Andrew A.
; APPLICANT: Rioux, Clement
; APPLICANT: Schryvers, Anthony B.
; TITLE OF INVENTION: CLONING AND EXPRESSION OF HAEMOPHILUS SOMNUS
; TITLE OF INVENTION: TRANSPERIN-BINDING PROTEINS
; FILE REFERENCE: 9000-0049.20
; CURRENT APPLICATION NUMBER: US/09/405,728
; CURRENT FILING DATE: 1999-09-24
; EARLIER APPLICATION NUMBER: US 09/267,749
; EARLIER FILING DATE: 1999-03-10
; NUMBER OF SEQ ID NOS: 5
; SOFTWARE: Patent In Ver. 2.0
; SEQ ID NO 3
; LENGTH: 662
; TYPE: PRT
; ORGANISM: Haemophilus somnus
US-09-405-728-3

Query Match 22.2%; Score 824; DB 3; Length 662;
Best Local Similarity 32.5%; Pred. No. 4.2e-48;
Matches 233; Conservative 99; Mismatches 249; Indels 136; Gaps 26;
Qy 58 NVGNAGGANGSGTGNAGSGNANGSGTANTPEPKYQDVPTDKNEKEQVSSIQEPAMGYAM 117
Db 13 SVALLSACSSGKGGFDLDVHTPPSSSGSRPTVPTGQORQEIIVEEINSALGAT 72
Qy 118 ELKLNHPLNPNKNEAEKRIALDQKOLVAVEGDLTNIPFDKNLIEYLKESSEVSKFE 177
Db 73 EIPRNPISPMPTGTGKESNARVAITAOQVAPL-----SMPFNSIKEDFIKRL----- 119
Qy 178 AQKGIENNTRUTHKDLSEKAEKALONALTOFAEQEKYKELIENAHDKKSDARNRD 237
Db 120 -----IAENTK-----KNARGDRVYFDTDVLF-----AHDGSLAHKRD 156
Qy 238 LEYKSGFNYLGYTATD-----HDKKTNYR-----GYGALYVKGSETAKELPOTSAKYKY 290
Db 157 LQYVRVG--YVLGTRKIELVSHDKKRDQPPAGWGVYVYQGTSPAVTLPTQVTVYKY 214
Qy 291 WDFMTDA-----TLDNKYT-----DLPGIARQTQWRSVSTDEYATLLTDKNNKPSDY 338
Db 215 WDFVSDAFNERTLAEDFTQENSSATSNIPG-----NQIGATSNALV-----NRKVSGE 263
Qy 339 NGAYGHSSEFVNFADKKIKKGLISN-----QLSGTAVTAKERYKIEADHGNRFGSATA 394
Db 264 KINIAHSAEFTADFGSKLSGELKNGVSVRIENEQDQVKRYKIDADIKGNRFVGSATA 323
Qy 395 SDAEDSKTQHPFTSDATNKLGGFYGPKEBELAGKFLTDNKLPGVFGAKRDKV--EKT 452
Db 324 QEKSHTI-----FGKADAKRLEGGFFGPKABELAGKFLTDNLSLFWFVFGAKRESKGDKL 378
Qy 453 EAILDAVALGTFNNTNKTATTPFTFKOLDNFGNAKLVLGSGTVINLV-----STDATKN 507
Db 379 ETRPDAVKISDSN-----KLEKETMDTFGNAYLVLDGRQPLVPESNAGTTGAGN 430
Qy 508 EFTKFTKDKPTSATFNKAGETLMWVDEIVIKTYGNRFBYKFLGELSGVD----- 556
Db 431 TGKNEFISTDGLHKNKTNHNHKKYKTVCC--SNLYVVKFG--SYGEQTTANDASNST 486
Qy 557 -----SHS-----VFLQERTATTGKAVPTTGKAKYLGW-----VGYTGTAGTG 597

Db 487 AGAATTHNSTLTNGHLFLTGERTSLT--DMAKQSGAAKYICTWQANFLSSKGVGSVDAG 544
Qy 598 KSFNEA-QDIADFDIDPERKSVKGLTTQGTDRDPVFNIGK-EIAGNGHTGKASTTKADAG 555
Db 545 DPNRDSKSRAEFDVNFEGGKTVTGKFFDADGIQALTMDSKTKIEGNGFSGTAKTT-----G 600
Qy 656 GYKIDSSSTGKSIIV--ENAEVTGGFYGNANEMGGSFTHDSDSKASVVFVGTGKQO 710
Db 601 SLQDKGSTGAGITVFTDAKVDGAFYGNABEIGGTTISNGTGDKVGVGFAGKQOE 657
RESULT 39
US-07-961-522-4
; Sequence 4, Application US/07961522
; Patent No. 5417971
; GENERAL INFORMATION:
; APPLICANT: POTTER, ANDREW A.
; APPLICANT: GERLACH, GERALD F.
; APPLICANT: WILSON, PHILIP J.
; APPLICANT: ROSSI-CAMPOS, AMALIA
; TITLE OF INVENTION: VACCINES FOR ACTINOBACILLUS
; TITLE OF INVENTION: PLEUROPNEMONIAE
; NUMBER OF SEQUENCES: 9
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: ROBERTA L. ROBINS
; STREET: 635 BRYANT STREET
; CITY: PALO ALTO
; STATE: CALIFORNIA
; COUNTRY: UNITED STATES OF AMERICA
; ZIP: 94301
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patent In Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/07/961,522
; FILING DATE: 19921015
; CLASSIFICATION: 435
; ATTORNEY/AGENT INFORMATION:
; NAME: ROBINS, ROBERTA L.
; REGISTRATION NUMBER: 33,208
; REFERENCE/DOCKET NUMBER: 9000-0015.20
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (415) 617-8999
; TELEFAX: (415) 327-3231
; INFORMATION FOR SEQ ID NO: 4:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 593 amino acids
; TYPE: AMINO ACID
; STRANDEDNESS: single
; TOPOLOGY: linear
; MOLECULE TYPE: peptide
US-07-961-522-4

Query Match 21.3%; Score 791; DB 1; Length 593;
Best Local Similarity 30.2%; Pred. No. 6.5e-46;
Matches 224; Conservative 104; Mismatches 231; Indels 182; Gaps 27;
Qy 3 HIPITTLCLVALSALLTACGSGGSGSNPAPPIPINAGSAGNAGGTGTTGGTSDNVGNA 62
Db 2 HFKLNPYALAPTSFLVAC-----SGKGSF----- 28
Qy 63 GGANGSGTGNAGSGNANGSGTANTPBPKYQDVPTDKNEKEQVSSIQEPAMGYAMELKUR 122
Db 29 -----LEVRNQTAKAEKATTSYQDETCKKTKELDKLNEPALGYETQILRR 77
Qy 123 NAHPLNPNKNEAEKRIALDQKOLVAVEGDLTNIPFDKNLIEYLKESSEVSKFEAQKGG 182
Db 78 NKAPKTGTGKERNVVELSE-----DK-ITKLYQESVELIIPHLD----- 116
Qy 183 IENRTRUTHKDLSEKAEKALONALTOFAEQEKYKELIENAHDKKSDARNRDLETVK 242

Db	117	-ELNGKTTSD-	-----VYHSDSKFLDKNRDLKYVR	146
Qy	243	SGFNYLSGYTATDHDKKTNYRGY-	-----GALYYKGSETAKELPQTS-A-KYKGWDFM	294
Db	147	SGYVYDGSF----	NEIRNDSGFHVFKQGIDGVYVYLGVTPSKELPGKVI SYKGTWDFV	202
Qy	295	TDATLDNKYT--DLPGIAROTQWRSLVSTDEYATLLT	DKNNKPSDYNG-----AVGHSE	347
Db	203	SNINLEREBIDGFTSDGDKNYSATSI	TET-----VNRDHKVGEKLGDNVEVKVGHRSSE	255
Qy	348	FDVNFADKKIKGLISNQL--SGTAVTAKERYKIEAD	IHGHRFGRSATSADSKAEDSKQH	405
Db	256	FAVDKNNKLLGSLVNRGYINRNKAQEVET	KRYSIEADIAGNFRGKAKA-EKAGD-----	309
Qy	406	PFTSDATNKLGGFGYPGKEELAGKFLD	DDNKLFGVFGAKRDKVB-KTEAILDAVALGTF	464
Db	310	PIPTD-SNLYEGGFGPKAEEMAGKFF	TNNKSLFAVFAAKSENGTFTTIERIIDATKI	365
Qy	465	NNTNKATFTPTTKQLDNFGNAKLLVL	GSTVINLVSATDKNEFTKKTDPKTPSATNK	524
Db	366	-----DLTQFNAKELNNFGDASV	LIIDGOKIDLGVNF-----X	399
Qy	525	AGETLAWNDEVIVK-TYKGNFEYLYK	FGBEL-----SVCDSHVSFLOBERTATTGEKAVP	576
Db	400	NSKTVEINGKTMVAVACCSNLEYMK	FGOLWQEGEQVKD-NSLFLQBERTAT---DKMP	455
Qy	577	TTGKAKYLGNNVGYITGAGT-----	GKSFNEAQDIADFDIDPERKSVMKGLTTQGRTPDV	631
Db	456	AGBNYKVGVTWDALVS-KGTNWI	AEADNNRSGSVRTEFDVNFSDKKVNGKLPDKGGVNPV	514
Qy	632	FNIRKEIAGNGWTGKASTTKADAGY	KIDS--SSTGKSIVIENAEVTCGGFYGNANEMGGS	690
Db	515	FTVDATINGNGFISAKTSDS--	GFPALDAGSSQHGNVAFSDIKVNGGFYGTAGELGGQ	571
Qy	691	FTHTDDSKASVWFTRQOE	711	
Db	572	FHHKSDNGSVGAFEGAKROIE	592	

RESULT 40

US-08-217-438--4
; Sequence 4, Application US/08217438
; Patent No. 5521072
; GENERAL INFORMATION:
; APPLICANT: Potter, Andrew A.
; APPLICANT: Gerlach, Gerald P.
; APPLICANT: Willson, Philp J.
; APPLICANT: Rossi-Campos, Amalia
; TITLE OF INVENTION: ACTINOBACILLUS PLEUROPNEUMONIAE
; TRANSFERRIN BINDING PROTEINS AND USES THEREOF
; NUMBER OF SEQUENCES: 11
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Reed & Robins
; STREET: 635 Bryant Street
; CITY: Palo Alto
; STATE: California
; COUNTRY: USA
; ZIP: 94301
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patentin Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/217,438
; FILING DATE: 22-MAR-1994
; CLASSIFICATION: 435
; ATTORNEY/AGENT INFORMATION:
; NAME: Robins, Roberta L.
; REGISTRATION NUMBER: 33,208
; REFERENCE/DOCKET NUMBER: 9001-0015.01
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 415-617-8999

```

; TELEFAX: 415-327-3231
; TELEX:
; INFORMATION FOR SEQ ID NO: 4:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 593 amino acids
; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; US-08-217-438-4

Query Match 21.3%; Score 791; DB 1; Length 593;
Best Local Similarity 30.2%; Pred. No. 6.5e-46;
Matches 224; Conservative 104; Mismatches 231; Indels 182; Gaps 27;

Qy 3 HPLTLTCLVAISAVLLTACGGSGSNPPAPTPIPNAGSAGNAGGTGNTGGTGTSDVVGNA 62
Db 2 HFKLPYALAFSLFLVAC-----SGKGSGFD----- 28

Qy 63 GGANSGTGNAGNSGNANSANTPEPKYQDVPTDKNKEQVSSIQEAMGYAMELKLR 122
Db 29 -----LEDVRPNQTAKEAKATTSYQDEBTCKTKKEELDKLMEPALGYETQILRR 77

Qy 123 NAHPLPNKNKEAEKRIALDOKDLVAVEGDLTNI PFDKNLIEYLKSSSEVVSFEAQKG 182
Db 78 NKAPKTETGEKNRVVELSE-----DK-ITKLYQSEVLIIPHL----- 116

Qy 183 IENNRLTHKDLSSQEAKVKVEBALDNALTQFAQEKYKELIENAHDKSDARNRDLEYVK 242
Db 117 -ELNGKTTSD-----VYHSHDSKRLDKNRDLKYVR 146

Qy 243 SGFNYLSGYTATDHDKKTNYRGY-----GALYYKGSSETAKELPQTS-A-KYKGTYWDM 294
Db 147 SGVYVPGSF---NEIRNDSGFHVFKQIGDGVVYLVGTPSKELPKGKVI SYGTWDFV 202

Qy 295 TDATLKNKYT -DLPGIARQTWRSLVSTDEVATLLTDKNKPSDYNG-----AYGHSSE 347
Db 203 SNINLREIDGPTSGDGKNVSAITSIT-----VNRDHKVGKLGDNVKGVAHSE 255

Qy 348 FDNVPADKKTKIGKLISNQL -SGTAVTAKERYKIEADIHGNRPRGSATASDKAEDSKTOH 405
Db 256 FAVDFONKKLTGSLRYNGYINRNKAQEVTKRYKYSIEADIAGNRPGRKAKA -EKAGD----- 309

Qy 406 PFTSDATNKLGGFGYCPKGEELAGKFLTDNKLFGYVFGAKRDKVE -KTEAILDVAALGTIF 464
Db 310 PIFTD -SNYLEGGFGYGPKAEEAWGKEFTNNKSLFAVFAAKSENGETTERIDATKI--- 365

Qy 465 NNTNKATFTFPFKQLDNDFGNAKKLVLGSGTIVNLVSTDATKNEFTKTKTKDKPTSATNK 524
Db 366 -----DUTQFNAKELNFGDASVLII DQKIDLAGVNF-----K 399

Qy 525 AGETLWMDNEVIVK -TYGKNFEYLFKFGEL-----SVGDSSHVFLQERTATTGKAVP 576
Db 400 NSKTIVNGTWMVAVACCSNLEYMKFGQLMQKGEKQOVKD -NSLFLQERTAT---DKMP 455

Qy 577 TTCAKYLGNNWGYITGAGT---GKSFNEAQDIAFDPI DPERKSVKGLTTQGRTPDV 631
Db 456 AGGNYKIVGTWDAULVS -KGNWTIAEDNNRESGYRTEFDVNFSDKKVNGKLPDKGVNVP 514

Qy 632 FNIKGEIAGNGTGWKASTTKADAGGYKIDS -SSTGKSI VIENAEVTTGGFYGPNANEMGGS 690
Db 515 FTVDATINGNGFVIGSAKTSDS---GFALDAGSQHGNVAFSDIKVNGGFGYPTAGELGG 571

Qy 691 FTHTDDSDKASVVFYTKRQOE 711
Db 572 FHHKSDNGSVGAVFGAKRQIE 592

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Search completed: February 23, 2005, 20:23:21
Job time : 33.0976 secs

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OM protein - protein search, using sw model

Run on: February 23, 2005, 20:07:47 ; Search time 26.061 Seconds
(without alignments)
2039.451 Million cell updates/sec

Title: US-09-673-133-4
Perfect score: 3709
Sequence: 1 MKHPLTLCVAISAVLLTA.....DKDSSAVVFGARQKQVEKP 712

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 513545 seqs, 74649064 residues

Total number of hits satisfying chosen parameters: 513545

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : Issued Patents AA:*
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2: /cgn2_6/ptodata/1/iaa/5B_COMB.pep:*
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4: /cgn2_6/ptodata/1/iaa/6B_COMB.pep:*
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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	ID	Description
1	3709	100.0	712	4	US-09-059-584-51
2	2594	69.9	709	4	US-08-778-570B-15
3	2594	69.9	709	4	US-09-059-584-15
4	2569.5	69.3	707	2	US-08-949-941B-2
5	2497	67.3	689	4	US-08-778-570B-16
6	2497	67.3	689	4	US-09-059-584-16
7	1929	52.0	713	4	US-09-059-584-53
8	1922	51.8	713	4	US-09-059-584-49
9	1884.5	50.8	706	4	US-09-059-584-46
10	1851.5	49.9	702	3	US-08-613-009A-9
11	1851.5	49.9	702	4	US-08-778-570B-11
12	1851.5	49.9	702	4	US-09-059-584-11
13	1847.5	49.8	702	2	US-08-867-941-25
14	1847.5	49.8	702	3	US-09-074-658-25
15	1754.5	47.3	682	3	US-08-613-009A-10
16	1754.5	47.3	682	4	US-08-778-570B-12
17	1754.5	47.3	682	4	US-09-059-584-12
18	1088	29.3	416	4	US-09-540-236-2388
19	950	25.6	601	3	US-08-613-009A-20
20	950	25.6	601	4	US-08-778-570B-26
21	950	25.6	601	4	US-09-059-584-26
22	942.5	25.4	578	3	US-08-448-194-61
23	942.5	25.4	578	3	US-08-867-921-61
24	937	25.3	599	3	US-08-448-194-2
25	937	25.3	599	3	US-08-867-921-2
26	931.5	25.1	598	1	US-08-487-890A-97
27	931.5	25.1	598	2	US-08-478-435-97

28	931.5	25.1	598	2	US-08-337-483-97	Sequence 97, Appl
29	931.5	25.1	598	2	US-08-478-373-97	Sequence 97, Appl
30	931.5	25.1	598	3	US-08-474-671-97	Sequence 97, Appl
31	931.5	25.1	598	3	US-08-483-577A-97	Sequence 97, Appl
32	931.5	25.1	598	3	US-08-897-438-97	Sequence 97, Appl
33	931.5	25.1	598	3	US-08-637-654-97	Sequence 97, Appl
34	931.5	25.1	598	3	US-08-649-518-97	Sequence 97, Appl
35	913	24.6	593	1	US-07-961-522-4	Sequence 4, Appli
36	913	24.6	593	1	US-08-217-438-4	Sequence 4, Appli
37	913	24.6	593	1	US-08-217-438-5	Sequence 5, Appli
38	913	24.6	593	1	US-08-487-890A-100	Sequence 100, App
39	913	24.6	593	1	US-08-321-978-4	Sequence 4, Appli
40	913	24.6	593	2	US-08-710-584-4	Sequence 4, Appli
41	913	24.6	593	2	US-08-478-435-100	Sequence 100, App
42	913	24.6	593	2	US-08-337-483-100	Sequence 100, App
43	913	24.6	593	2	US-08-478-373-100	Sequence 100, App
44	913	24.6	593	3	US-08-474-671-100	Sequence 100, App
45	913	24.6	593	3	US-08-483-577A-100	Sequence 100, App

ALIGNMENTS

RESULT 1
US-09-059-584-51
; Sequence 51, Application US/09059584
; Patent No. 6440701
; GENERAL INFORMATION:
; APPLICANT: Myers, Lisa E
; APPLICANT: Schreyers, Anthony B
; APPLICANT: Harkness, Robin E
; APPLICANT: Loosmore, Sheena M.
; APPLICANT: Du, Run-Pan
; APPLICANT: Yang, Yan-Ping
; APPLICANT: Klein, Michel H
; TITLE OF INVENTION: Transferrin Receptor Genes of Moraxella
; NUMBER OF SEQUENCES: 60
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Sam & McBurney
; STREET: 6th Floor, 330 University Avenue
; CITY: Toronto
; STATE: Ontario
; COUNTRY: Canada
; ZIP: M5G 1R7
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/09/059,584
; FILING DATE: 14-APR-1998
; CLASSIFICATION:
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/778,570
; FILING DATE: 03-JAN-1997
; CLASSIFICATION:
; ATTORNEY/AGENT INFORMATION:
; NAME: Stewart, Michael I
; REGISTRATION NUMBER: 24973
; REFERENCE/DOCKET NUMBER: 1038-794
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (416) 595-1155
; TELEFAX: (416) 595-1163
; INFORMATION FOR SEQ ID NO: 51:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 712 amino acids
; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear
US-09-059-584-51

Query Match 100.0%; Score 3709; DB 4; Length 712;

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Best Local Similarity 100.0%; Pred. No. 2.2e-259;
Matches 712; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 MKHPLTLTLCVAISAVLLTACGGSGSNPPAPTPIPNAGGAGNAGSGTGGAGSTDAANA 60
Db 1 MKHPLTLTLCVAISAVLLTACGGSGSNPPAPTPIPNAGGAGNAGSGTGGAGSTDAANA 60

Qy 61 GSTGASSGTGSASTQPKYQDVPTDKNKDEVSIGIQBPAMGYGVELKLRNWIPOEHEH 120
Db 61 GSTGASSGTGSASTQPKYQDVPTDKNKDEVSIGIQBPAMGYGVELKLRNWIPOEHEH 120

Qy 121 AKINTNDVVKLEGLDKHNPFDNSIWQNIKNSKEVQTVVYQBNKQIENQIKKENKELDKTA 180
Db 121 AKINTNDVVKLEGLDKHNPFDNSIWQNIKNSKEVQTVVYQBNKQIENQIKKENKELDKTA 180

Qy 181 LKALIEKVLDDYLSLAKPIYEKININDSHDKONKARTEDLKYVRSGYLYRSYGNIDIOK 240
Db 181 LKALIEKVLDDYLSLAKPIYEKININDSHDKONKARTEDLKYVRSGYLYRSYGNIDIOK 240

Qy 241 KIATGFDGALFYKGTQTAQKLPVSEVKYKGTWDMTDAKKGQSFSPERRAGDRYSAMS 300
Db 241 KIATGFDGALFYKGTQTAQKLPVSEVKYKGTWDMTDAKKGQSFSPERRAGDRYSAMS 300

Qy 301 SHEYPSLLTDDKNKPDNNYDYGHSSEPTVDFSKSLTGGFLSNLQDHHKGVTKTKRYD 360
Db 301 SHEYPSLLTDDKNKPDNNYDYGHSSEPTVDFSKSLTGGFLSNLQDHHKGVTKTKRYD 360

Qy 361 INARHGNRFRGSATAIKNDKESKAKHPPTSDADNLEGGYGNABELAGKFLTDNKL 420
Db 361 INARHGNRFRGSATAIKNDKESKAKHPPTSDADNLEGGYGNABELAGKFLTDNKL 420

Qy 421 FGVFCAQESKATEALIDAYALGTFNKSGTTPAFTANSKELDNPKNKLVLGSTV 480
Db 421 FGVFCAQESKATEALIDAYALGTFNKSGTTPAFTANSKELDNPKNKLVLGSTV 480

Qy 481 IDLTQGNDFVKTIDKEKPATTTNQAQEPLTVNDKVRVQVCCSNLEHLKFGSLSGDNSV 540
Db 481 IDLTQGNDFVKTIDKEKPATTTNQAQEPLTVNDKVRVQVCCSNLEHLKFGSLSGDNSV 540

Qy 541 FLOERTATKDKDKAMPVAGNAYKRGTWAGYVAGSGNTSKAYEAQPADNANRAEFVD 600
Db 541 FLOERTATKDKDKAMPVAGNAYKRGTWAGYVAGSGNTSKAYEAQPADNANRAEFVD 600

Qy 601 FANKSLTGKLPNTSSDGKSAFDITATIDGNGFSGKANTPDIEGTGLKIDSKNSSEGRVI 660
Db 601 FANKSLTGKLPNTSSDGKSAFDITATIDGNGFSGKANTPDIEGTGLKIDSKNSSEGRVI 660

Qy 661 VKDAIVIGGYPQANELGGSFTYKSNDAQNQDSSASVVFVGARKQOEKVP 712
Db 661 VKDAIVIGGYPQANELGGSFTYKSNDAQNQDSSASVVFVGARKQOEKVP 712

```

RESULT 2
US-08-778-570B-15
; Sequence 15, Application US/08778570B
; Patent No. 6437096
; GENERAL INFORMATION:
; APPLICANT: Myers, Lisa E
; APPLICANT: Schryvers, Anthony B
; APPLICANT: Harkness, Robin E
; APPLICANT: Loosmore, Sheena M.
; APPLICANT: Du, Run-Pan
; APPLICANT: Yang, Van-Ping
; APPLICANT: Klein, Michel H
; TITLE OF INVENTION: Transferrin Receptor Genes of Moraxella
; NUMBER OF SEQUENCES: 43
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Sim & McBurney
; STREET: 6th Floor, 330 University Avenue
; CITY: Toronto
; STATE: Ontario
; COUNTRY: Canada
; ZIP: M5G 1R7

```

; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/778,570B
; FILING DATE: 03-JAN-1997
; CLASSIFICATION: 536
; ATTORNEY/AGENT INFORMATION:
; NAME: Stewart, Michael I
; REGISTRATION NUMBER: 24973
; REFERENCE/DOCKET NUMBER: 1038-664
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (416) 595-1155
; TELEFAX: (416) 595-1166
; INFORMATION FOR SEQ ID NO: 15:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 709 amino acids
; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; US-08-778-570B-15

Query Match 69.9%; Score 2594; DB 4; Length 709;
Best Local Similarity 72.4%; Pred. No. 7e-179;
Matches 535; Conservative 54; Mismatches 92; Indels 58; Gaps 18;

Qy 1 MKHPLTLTLCVAISAVLLTACGG--SGSNPPAPTPIPNAGGAGNAGS-----GTGGAGST 54
Db 1 MKHPLTLTLCVAISAVLLTACGGSSGGFNPPASTPIPNAGSGNAGNAGGTGGANS- 59

Qy 55 DNAANAGSTGASSGTGSASTQPKYQDVPTDKNKDEVSIGIQBPAMGYGVELKLRNWI 114
Db 60 -GAGNAGTGAGNAGSASTPEPKYKDVPTDENKAEVSGIQBPAMGYGVELKLRNWI 118

Qy 115 QEQEHAHAKINTNDVVKLEGLDKHNPFDNSIWQNIKNSKEVQTVVYQBNKQIENQIKKEN 174
Db 119 QEQEHAHAKINTNDVVKLEGLDKHNPFDNSIWQNIKNSKEVQTVVYQBNKQIENQIKKEN 178

Qy 175 E-----LDKLTALKALIEKVLDDYLSLAKPIYEKININDSHDKONKARTEDLKYVRS 229
Db 179 QRPDKLDDVALQAYIEKVLDDRLTELAKPIYEKININSHDKONKARTEDLKYVRSYI 238

Qy 230 RSGYSNIDIQKKTAKTGFQDGLFYKGTQTAQKLPVSEVKYKGTWDMTDAKKGQSF 288
Db 239 RSGYSNI-IPKKTAKTGFQDGLFYKGTQTAQKLPVSEVKYKGTWDMTDAKKGQSF 297

Qy 289 --ERRAGDRYSAMSSHEYPSSLITDDKNKPDNNYDYGHSSEFTVDFSKSLTGGFLSNLQ 346
Db 298 TSQRLAGDRYSAMSYHEYPSSLITDEKNKPDNNYGEYGHSSSEFTVDFSKSLKGLSSNIQ 357

Qy 347 DHKGVKTKRYDINARINRPRGSATAIKNDKESKAKHPPTSDADNLEGGYGN 406
Db 358 DGHKGSVNTKRYDIDANIGYRPRGSATADTTTASAKSKHPPTSDAKNSLEGGYGN 417

Qy 407 EELAGKFLTDNDKLPFGVFGAKQSEAKE-TEAILDALVALGTENKSGTTPAFTANSKEL 465
Db 418 EELAGKFLTDNDKLPFGVFGAKQSEAKE-TEAILDALVALGTENKSGTTPAFTANSKEL 477

Qy 466 DNFNINKLVLGSTVIDLT-----QGNDFVKTIDKEKPATTTNQAQEPLTVNDKVRVQV 519
Db 478 DNFNINKLVLGSTVIDLVPTGATKDVNEF-----KEPKSATNKAGETLMVNDVIVKT 532

Qy 520 --CCSNLEHLKFGSLSGDNSVFLQERTATKDKDKAMPVAGNAYKRGTWAGYVAGSG 577
Db 533 YGYGRNFEYLKFGSLSGDNSVFLQERTATKDKDKAMPVAGNAYKRGTWAGYVAGSG 587

Qy 578 ---NTSKAY-EAQQFADNANRAEFVDVFNKSLTGKLPNTSSDGKSAFDITATIDGNGF 633
Db 588 TGTSTGKSFNEAQDIAD-----FDIDFERKSVKGLTGTQGRD--PVFNITGTQIAGNW 639

Qy 634 SGKANTPDIEGTGLKIDSKNSSEGR-VIVKDAIVIGGYPQANELGGSFTYKSNDAQNQ 692

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Db 640 TGTASTAKANVGGYKIDS--SSTGKSI VIENAKVTGGFYGPANEMGGSFTHD----- 692

Qy 693 DKDSASVVFVGARKQOEYK 711

Db 693 --DSKASVVFVGTKRQEEYK 709

RESULT 3

US-09-584-15

; Sequence 15, Application US/09059584

; Patent No. 640701

; GENERAL INFORMATION:

; APPLICANT: Myers, Lisa E

; APPLICANT: Schryvers, Anthony B

; APPLICANT: Harkness, Robin E

; APPLICANT: Loomore, Sheena M.

; APPLICANT: Du, Run-Pan

; APPLICANT: Yang, Yan-Ping

; APPLICANT: Klein, Michel H

; TITLE OF INVENTION: Transferrin Receptor Genes of Moraxella

; NUMBER OF SEQUENCES: 60

; CORRESPONDENCE ADDRESS:

; ADDRESSEE: Sim & McBurney

; STREET: 6th Floor, 330 University Avenue

; CITY: Toronto

; STATE: Ontario

; COUNTRY: Canada

; ZIP: M5G 1R7

; COMPUTER READABLE FORM:

; MEDIUM TYPE: Floppy disk

; COMPUTER: IBM PC compatible

; OPERATING SYSTEM: PC-DOS/MS-DOS

; SOFTWARE: Patent In Release #1.0, Version #1.30

; CURRENT APPLICATION DATA:

; APPLICATION NUMBER: US/09/059,584

; FILING DATE: 14-APR-1998

; CLASSIFICATION:

; PRIOR APPLICATION DATA:

; APPLICATION NUMBER: US 08/778,570

; FILING DATE: 03-JAN-1997

; CLASSIFICATION:

; ATTORNEY/AGENT INFORMATION:

; NAME: Stewart, Michael I

; REGISTRATION NUMBER: 24973

; REFERENCE/DOCKET NUMBER: 1038-794

; TELECOMMUNICATION INFORMATION:

; TELEPHONE: (416) 595-1155

; TELEFAX: (416) 595-1163

; INFORMATION FOR SEQ ID NO: 15:

; SEQUENCE CHARACTERISTICS:

; LENGTH: 709 amino acids

; TYPE: amino acid

; STRANDEDNESS: single

; TOPOLOGY: linear

; US-09-584-15

Query Match

Best Local Similarity

Matches 535; Conservative 54; Mismatches 92; Indels 58; Gaps 18;

Qy 1 MKHPLTLTCAISAVLLTACGG-SGGSNPPAPTPIPAGGAGNAGS-----GTGGAGST 54

Db 1 MKHPLTLTCAISAVLLTACGG-SGGSNPPAPTPIPAGGAGNAGS-----GTGGAGST 54

Qy 55 DNAANAGTGGSSGTGASTQPKYQVPTDKNKKDEVSIGTQEPAMGYVELKLRNWP 114

Db 60 -GAGNAGTGGANSAGSASTPEPKYQVPTDKNKKDEVSIGTQEPAMGYVELKLRNWP 118

Qy 115 QOEQEHAKINTDVVKLEGLDKHNPFDNSIWQNIKNSKEVQTVYNQEKONTENQIKENK 174

Db 119 QOEQEHAKINTDVVKLEGLDKHNPFDNSIWQNIKNSKEVQTVYNQEKONTENQIKENK 178

Qy 175 E-----LDKTKALKALIEKVLDTSLAKPIYEKNINDSHDKONKARTDLDKYVRSYIY 229

Db 179 QRPKDLQALQAYIEKVLDTSLAKPIYEKNINDSHDKONKARTDLDKYVRSYIY 238

Qy 230 RSGYSNIDIQKKIAKTGFDGALFYKGTQTAKQLPVSEVKYKGTWDMFMDAKKGQSFSS- 288

Db 239 RSGYSNI-I PKIAKTGFDGALFYKGTQTAKQLPVSEVKYKGTWDMFMDAKKGQSFSSFG 297

Qy 289 --ERRAGDRYSAMSHYPSLLTDDKNKPDNVDYGHSSSEPTVDFSKSLTGGFLPSNLQ 346

Db 298 TSQRLAGDRYSAMSHYPSLLTDDKNKPDNVDYGHSSSEPTVDFSKSLTGGFLPSNLQ 357

Qy 347 DHKGVTKTKRYDINARIHGNRFRGSAATANKONESKAKHPFTSDADNRLEGGFGFVGPNA 406

Db 358 DHKGVTKTKRYDINARIHGNRFRGSAATANKONESKAKHPFTSDADNRLEGGFGFVGPNA 417

Qy 407 EELAGKFLTDNDKLFVGFCAKQSEAKE-TEALIDAYALGTFNKGSGTTNPAPFANSKKEL 465

Db 418 EELAGKFLTDNDKLFVGFCAKQSEAKE-TEALIDAYALGTFNKGSGTTNPAPFANSKKEL 477

Qy 466 DNFGNKLVLGSTVIDLT-----QGNDPVKTTIDKPKATTTNOAGBPLTVNDKRVQV 519

Db 478 DNFGNAKKLVLGSTVIDLVTGATKDVNEF-----KEPKSATNKAGETLMVNDVIVKT 532

Qy 520 --CCSNLEHLKFGSLSGDSNSVFLQGERATKGDKDKAMPVAGNAYKRGTWAGYVAGSG 577

Db 533 YGYGRNPFYLFKGBLSIGGSHSVFLQGBRTA-----EKAVPTEGTAKVLGNVWGVITGKD 587

Qy 578 --NTSKAY-EAQOFADNANRAEFVDVDFANKSLTGKLPNTSSDGKSAFDITATIDNGGF 633

Db 588 TGTSTGKSFNEAQDIAD-----FDIDFERKSVKGLTTQGRQD--PVFNITGQIAGNW 639

Qy 634 SGKANTPDIETGGLKIDSKNSESGR-VIVKDAIVIGFYGPQANBELGSGFTYKSNDAAGQ 692

Db 640 TGTASTAKANVGGYKIDS--SSTGKSI VIENAKVTGGFYGPANEMGGSFTHD----- 692

Qy 693 DKDSASVVFVGARKQOEYK 711

Db 693 --DSKASVVFVGTKRQEEYK 709

RESULT 4

US-08-949-941B-2

; Sequence 2, Application US/08949941B

; Patent No. 5972657

; GENERAL INFORMATION:

; APPLICANT: Murphy, Timothy F.

; APPLICANT: Sethi, Sanjay

; TITLE OF INVENTION: Gene Encoding Outer Membrane

; TITLE OF INVENTION: Protein B1 of Moraxella catarrhalis

; NUMBER OF SEQUENCES: 9

; CORRESPONDENCE ADDRESS:

; ADDRESSEE: Hodgson, Russ, Andrews, Woods & Goodyear

; ADDRESSEE: LLP

; STREET: 1800 One M&T Plaza

; CITY: Buffalo

; STATE: New York

; COUNTRY: United States

; ZIP: 14203-2391

; COMPUTER READABLE FORM:

; MEDIUM TYPE: Diskette, 3.5 inch, 1.44 Kb storage

; COMPUTER: IBM Compatible

; OPERATING SYSTEM: Windows 95

; SOFTWARE: Wordperfect

; CURRENT APPLICATION DATA:

; APPLICATION NUMBER: US/08/949,941B

; FILING DATE: 14 October 1997

; ATTORNEY/AGENT INFORMATION:

; NAME: Nelson, M. Bud

; REGISTRATION NUMBER: 35,300

; REFERENCE/DOCKET NUMBER: 11520.00

; TELECOMMUNICATION INFORMATION:

; TELEPHONE: (716) 856-4000

```

; TELEFAX: (716) 849-0349
; INFORMATION FOR SEQ ID NO: 2:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 707 residues
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: protein
; DESCRIPTION: protein
; HYPOTHETICAL: yes
US-08-949-941B-2

Query Match      69.3%; Score 2569.5; DB 2; Length 707;
Best Local Similarity 71.6%; Pred. No. 4.1e-177;
Matches 515; Conservative 68; Mismatches 115; Indels 21; Gaps 9;

Qy 1 MKHPLTLLCAISAVLLTACGGSGSNPPAPTPIPNAGGAGNAGSGTGGAGSTDNAANA 60
Db 1 MKHPLTLLCAISAVLLTACGGSGSNPPAPTPIPNAGSGGNTGN-TGNAGGTDTNANA 59

Qy 61 GSTGASSTGSASTQPKYQDVPTDKNKKDEVSGIQEPAMGYGVELKLRNWP---QE 116
Db 60 GNTGTSSTGSASTSEPKYQDVPTPNKKQVSSIQEPAMGYAMELKLRNAHPNPK 119

Qy 117 QEEHAKINTNDVVKLEGLKHPDINSIWQNIKNSKEVQTVYNQEKQNIQIKENKEL 176
Db 120 TEKRIALQKOLVAVEGNLTNIPDKNLIIEYLKKSPEVSKFNEQKGGIENNTRLTKDL 179

Qy 177 DKTALKALIEKVLDDYLTSLAKPIYEKNIINSHDKONKARTDRDLKYVRSGYIYRSGYNI 236
Db 180 SSEQKEAKVQALDN-----AQEKYKELIEAHDKSDARNRDLKYVSGFYNIUSGYTAT 234

Qy 237 DIQKIAKTGPDGALFYKGTQAKQLPVSEVKYKGTWDMTDAKKQGSFSFE--RRAGD 294
Db 235 DHDKTNVRYGYGALYYKGSETAKELPQTSKAKYKGTWDMTDA TLNKKYVTLPGIARQTQ 294

Qy 295 RYSAMSSHEYPSLLTDDKNKDDNYNDEYCHSEFTVDFSKSLTGLGSLNLDHKKGK-V 353
Db 295 WRSLVSTDEYATLLTDDKNKPSDYNGAYGHSSEFDVNFADKKVTGKLJLN---QLSGKTV 351

Qy 354 TKTRYDINARIHGNRPGSATAINKNESKAKHPFTSDADNRLEGFGYPGNAEELAGKF 413
Db 352 TAKERYKEADIHGNRFGSAIEAKETDESXKHPFTSDADNRLEGFGYPGPKBELAGKF 411

Qy 414 LTDDNKLFGVGAQOESPAKE-TEAILDAYALGTFNKS GTTNPAPTANSKKELDNFGNIN 472
Db 412 LTDDNKLFGVGAQOESPAKE-TEAILDAYALGTFNKS GTTNPAPTANSKKELDNFGNIN 471

Qy 473 KLVLGSTVIDLTQGNDFVKTIDKEKPATTTNQAGEPLTVNDKRVQVCCSNLEHLKFGSL 532
Db 472 KLVLGSTVIDLTQGNDFVKTIDKEKPATTTNQAGEPLTVNDKRVQVCCSNLEHLKFGSL 531

Qy 533 SIGDSNVFLOGERTATGDKDKAMPVAGNAKYGTWAGYVAGSGNTSKAYEAQOAFADNA 592
Db 532 SIGDSNVFLOGERTATG--DKAMPVVGNAKYGTWAGYVAGSGNTSKGTEAOKFADNA 589

Qy 593 NRAEFDVDFAKSLTGKLIPTNTSSDGKSAFDTITIDGNGFSKANTPDIETGGLKIDSK 652
Db 590 NRAEFDVDFAKSLTGKLIPTNTSSDGKSAFDTITIDGNGFSKANTPDIETGGLKIDSK 649

Qy 653 NSEGRVIVKDAIVTGGYGPQANELGSGFTYKNSDAGNQDKDSASVVFQARKQOEYK 711
Db 650 NTEGRVIVKDAIVTGGYGPQANELGSGFTYKNSDAEN--KDSSASVVFQARKQOEYK 706

RESULT 5
US-08-778-570B-16
; Sequence 16, Application US/08778570B
; Patent No. 6437096
; GENERAL INFORMATION:
; APPLICANT: Myers, Lisa E
; APPLICANT: Schryvers, Anthony B
; APPLICANT: Harkness, Robin E
; APPLICANT: Loomsore, Sheena M.

```

```

; APPLICANT: Du, Run-Pan
; APPLICANT: Yang, Yan-Ping
; APPLICANT: Klein, Michel H
; TITLE OF INVENTION: Transferrin Receptor Genes of Moraxella
; NUMBER OF SEQUENCES: 43
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Sim & McBurney
; STREET: 6th Floor, 330 University Avenue
; CITY: Toronto
; STATE: Ontario
; COUNTRY: Canada
; ZIP: M5G 1R7
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.30
; CURRENT APPLICATION DATA: US/08/778,570B
; APPLICATION NUMBER: US/08/778,570B
; FILING DATE: 03-JAN-1997
; CLASSIFICATION: 536
; ATTORNEY/AGENT INFORMATION:
; NAME: Stewart, Michael I
; REGISTRATION NUMBER: 24973
; REFERENCE/DOCKET NUMBER: 1038-664
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (416) 595-1155
; TELEFAX: (416) 595-1163
; INFORMATION FOR SEQ ID NO: 16:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 689 amino acids
; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear
US-08-778-570B-16

Query Match      67.3%; Score 2497; DB 4; Length 689;
Best Local Similarity 71.6%; Pred. No. 6.8e-172;
Matches 515; Conservative 54; Mismatches 92; Indels 58; Gaps 18;

Qy 21 CGG-SGGSNPPAPTPIPNAGGAGNAGS-----GTGGAGSTDNAANAGSGTGGASSTGSAS 74
Db 1 CGGSGGFPNPPAPTPIPNAGSGNAGNAGGTGGANS--GAGNAGGTGGANSAGSAS 58

Qy 75 TQPKYQDVPTDKNKKDEVSGIQEPAMGYGVELKLRNWIPOEQUEHAKINTNDVVKLEGD 134
Db 59 TPEPKYQDVPTDENKKAESGIEPAMGYGVELKLRNWIPOEQUEHAKINTNDVVKLEGD 118

Qy 135 LKHNPFONSIMQNIKNSKEVQTVYNQEKQNIQIKENK-----LDKTALKALIEKVL 189
Db 119 LKHNPFONSIMQNIKNSKEVQTVYNQEKQNIQIKENKQRPDKLDDVALQAYIEKVL 178

Qy 190 DDYLTSLAKPIYEKNIINSHDKONKARTDRDLKYVRSGYIYRSGYSNIDIOKKIATGPDG 249
Db 179 DDLRTELAKPIYEKNIINSHDKONKARTDRDLKYVRSGYIYRSGYSNII-IPKKIATGPDG 237

Qy 250 ALFYKGTQTAKQLPVSEVKYKGTWDMTDAKKQGSFSSF---ERRAGDRYSAMSSHEYPS 306
Db 238 ALFYKGTQTAKQLPVSOVKYKGTWDMTDAKKQGSFSSFSGTSQRLAGDRYSAMSSHEYPS 297

Qy 307 LLTDDKNKPDNYNDEYGHSSSEFTVDFSKSLTGLFNSLQDHHKGVTKTKRYDINARIH 366
Db 298 LLTDEKNKPDNYNDEYGHSSSEFTVDFSKSLKGLSSNIQDCHKGVNKTTRYDIDANIY 357

Qy 367 GNRFRGSATAINKNESKAKHPFTSDADNRLEGFGYPGNAEELAGKELTDNKLFGVFGA 426
Db 358 GNRFRGSATASDPTTASKSKHPFTSDAKNSLEGFGYPGNAEELAGKFTNNDKLFVGFVGA 417

Qy 427 KOESEAKE-TEAILDAYALGTFNKS GTTNPAPTANSKKELDNFGNINKVLGSGTVIDLT- 484
Db 418 KRESEAKEKTEAILDAYALGTFNKGPTTNPAPTANSKKELDNFGNAKKVLGSGTVIDLVP 477

Qy 485 -----QGNDFVKTIDKEKPATTTNQAGEPLTVNDKRVQV---CCSNLEHLKFGSLSIGDS 537

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Db      478 TGATKDVNEF-----KEPKSATNKAGETLWVNDVIVKTYGGRNPEYLFKFGELSIGGS 532
Qy      538 NSVFLQGBRTATKGDOKAMPVAGNAKYRGTWAGVAGSG---NTSKAY-BAQFPADNAN 593
Db      533 HSVFLQGBRTA-----EKAVPTEGTAKYLGNNVGYITGKDTGTSTGKSFNEAQDIAD--- 584
Qy      594 RAEPDVEDFANKSLTGKLPNTSSDGKSAFDITATIDGNGFSGKANTPDIETGGLKIDSKN 653
Db      595 ---FDIDFERKSVKGLTQGRQD---PVFNITGQIAGNGWTGTASTAKANVGGYKIDS-- 637
Qy      654 SESGR-VIVKDAIVIGGYFQANBELGGSFTYKSNDAQNQDKSSASVVFQARKQOEYK 711
Db      638 SSTGKSVIENAKVTGGFYGNANEMGGSFTHDTD-----DSKASVVFQARKQOEYK 689

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RESULT 6

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US-09-059-584-16
; Sequence 16, Application US/09059584
; Patent No. 6440701
; GENERAL INFORMATION:
; APPLICANT: Myers, Lisa E
; APPLICANT: Schryvers, Anthony B
; APPLICANT: Harkness, Robin E
; APPLICANT: Loosmore, Sheena M.
; APPLICANT: Du, Run-Pan
; APPLICANT: Yang, Yan-Ping
; APPLICANT: Klein, Michel H
; TITLE OF INVENTION: Transferrin Receptor Genes of Moraxella
; NUMBER OF SEQUENCES: 60
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Sim & McBurney
; STREET: 6th Floor, 330 University Avenue
; CITY: Toronto
; STATE: Ontario
; COUNTRY: Canada
; ZIP: M5G 1R7
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
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; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patent In Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/09/059,584
; FILING DATE: 14-APR-1998
; CLASSIFICATION:
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/778,570
; FILING DATE: 03-JAN-1997
; CLASSIFICATION:
; ATTORNEY/AGENT INFORMATION:
; NAME: Stewart, Michael I
; REGISTRATION NUMBER: 24973
; REFERENCE/DOCKET NUMBER: 1038-794
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (416) 595-1155
; TELEFAX: (416) 595-1163
; INFORMATION FOR SEQ ID NO: 16:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 689 amino acids
; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear

```

```

US-09-059-584-16
Query Match 67.3%; Score 2497; DB 4; Length 689;
Best Local Similarity 71.6%; Pred. No. 6.8e-172;
Matches 515; Conservative 54; Mismatches 92; Indels 58; Gaps 18;

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Qy      21 CGG-SGGSNPPATPIPNAGGAGNAGS-----GTGAGSTDAANAGSTGAGSAGTGSAS 74
Db      1 CGGSSGGNPPATPIPNAGSNAGNAGGTGGANS--GAGNAGGTGGANSAGSAS 58

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Qy      75 TOKPKYQDVPDTPDKNKKDEVSGIQBPAMGYGVVELKLRNWIPOEBEHAKINTNDVVKLBGD 134
Db      59 TPBPKYQDVPDTPDKNKKDEVSGIQBPAMGYGVVELKLRNWIPOEBEHAKINTNDVVKLBGD 118
Qy      135 LKHNPFDNSIWONIKNSKEVQTVVYVNOEKQNIENQIKKENKE-----LDKTKALKALIEKVL 189
Db      119 LKHNPFDNSIWONIKNSKEVQTVVYVNOEKQNIENQIKKENKE-----LDKTKALKALIEKVL 178
Qy      190 DDYLTSLAKPIYEKNIINSHDKQNKARTDILKYVRSYVYIYRSGYSNIDIOKKIATGTGPDG 249
Db      179 DDRITELAKPIYEKNIINSHDKQNKARTDILKYVRSYVYIYRSGYSNIDIOKKIATGTGPDG 237
Qy      250 ALFYKGTQTKOLPVSVEVYKGTWDFMTDAKKGOSFSSF---ERRAGDRYSAMSSHEVPS 306
Db      238 ALFYKGTQTKOLPVSVEVYKGTWDFMTDAKKGOSFSSF---ERRAGDRYSAMSSHEVPS 297
Qy      307 LLTDDKNKPDNYNDEYGHSSSEFTVDFSKSLTGLFSLNLDHKKGKVTTKRYDINARIH 366
Db      298 LLTDDKNKPDNYNDEYGHSSSEFTVDFSKSLTGLFSLNLDHKKGKVTTKRYDINARIH 357
Qy      367 GNRFRGSATANKDNESKAKHPPTSDADNRLEGGFYGNABELAGKFLTDNKLFGVFGA 426
Db      358 GNRFRGSATADTTTASASKHPPTSDAKNSLEGGFYGNABELAGKFLTDNKLFGVFGA 417
Qy      427 KOESEAKE-TEAILDAVALGTFNKGSTTNPAPTANSKELONFGNINKLVLGSTVIDLT- 484
Db      418 KRESEAKEKTEAILDAVALGTFNKGSTTNPAPTANSKELONFGNINKLVLGSTVIDLVP 477
Qy      485 ---QGNDFVKTIDKEKPATTTNQAGEPLTVNDKRVQV---CCSNLEHLKFGSLISIGDS 537
Db      478 TGATKDVNEF-----KEPKSATNKAGETLWVNDVIVKTYGGRNPEYLFKFGELSIGGS 532
Qy      538 NSVFLQGBRTATKGDOKAMPVAGNAKYRGTWAGVAGSG---NTSKAY-BAQFPADNAN 593
Db      533 HSVFLQGBRTA-----EKAVPTEGTAKYLGNNVGYITGKDTGTSTGKSFNEAQDIAD--- 584
Qy      594 RAEPDVEDFANKSLTGKLPNTSSDGKSAFDITATIDGNGFSGKANTPDIETGGLKIDSKN 653
Db      595 ---FDIDFERKSVKGLTQGRQD---PVFNITGQIAGNGWTGTASTAKANVGGYKIDS-- 637
Qy      654 SESGR-VIVKDAIVIGGYFQANBELGGSFTYKSNDAQNQDKSSASVVFQARKQOEYK 711
Db      638 SSTGKSVIENAKVTGGFYGNANEMGGSFTHDTD-----DSKASVVFQARKQOEYK 689

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RESULT 7

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US-09-059-584-53
; Sequence 53, Application US/09059584
; Patent No. 6440701
; GENERAL INFORMATION:
; APPLICANT: Myers, Lisa E
; APPLICANT: Schryvers, Anthony B
; APPLICANT: Harkness, Robin E
; APPLICANT: Loosmore, Sheena M.
; APPLICANT: Du, Run-Pan
; APPLICANT: Yang, Yan-Ping
; APPLICANT: Klein, Michel H
; TITLE OF INVENTION: Transferrin Receptor Genes of Moraxella
; NUMBER OF SEQUENCES: 60
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Sim & McBurney
; STREET: 6th Floor, 330 University Avenue
; CITY: Toronto
; STATE: Ontario
; COUNTRY: Canada
; ZIP: M5G 1R7
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patent In Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/09/059,584

```

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; FILING DATE: 14-APR-1998
; CLASSIFICATION:
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/778,570
; FILING DATE: 03-JAN-1997
; CLASSIFICATION:
; ATTORNEY/AGENT INFORMATION:
; NAME: Stewart, Michael I
; REGISTRATION NUMBER: 24973
; REFERENCE/DOCKET NUMBER: 1038-794
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (416) 595-1155
; TELEFAX: (416) 595-1163
; INFORMATION FOR SEQ ID NO: 53:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 713 amino acids
; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; US-09-059-584-53

Query Match 52.0%; Score 1929; DB 4; Length 713;
Best Local Similarity 54.5%; Pred. No. 7.3e-131; Mismatches 180; Indels 52; Gaps 15;
Matches 402; Conservative 104;

Qy 1 MKHIPLTLCVAISAVLLTACGGSGSNPPAPTPIPNAGGAGNAG--SGTGGAGSTDN-- 56
Db 1 MKHIPLTLCVAISAVLLTACGGSGSNPPAPTPIPNAGSAGNAGGTGCTGSTDNVG 60

Qy 57 -----AANAGSTGGASSTGSGASTQPKYQDVPTDKNKKDEVSGIOEPAMGYVELK 108
Db 61 NAGGANSSTGNAGSNAGNSGTSANTPEPKYQDVPTDKNEKEQVSSIOEPAMGYAMELK 120

Qy 109 LRNPW-----QOEHEHAKINTVDVKLEGDLKHNPEDNSIWQNIKNSKEVQTVYQEK 162
Db 121 LRNAHLPNPNKKEAKRIALDQDLVAVEGDLTNIPDKNLEIYLLKSSSEVSKFEAQK 180

Qy 163 QNIENQIKENKELDKTAKALIEKVLDDYLTSLAKPIYEKNINDSHDKONKARTDRLKY 222
Db 181 GGIENNTLTHKDLSSSEQEAKEVKEALDNLATQFAQEYKELIENAHDKSDARNRDLEY 240

Qy 223 VRSGYIVRSYNSIDIOKIAKTQDGFALFYKQTAKQLPVSVEYKGTWDFMTDAKGG 282
Db 241 VKSGFNLSGYTATDHDKKTNYRGYALYKYGSETAKELPQTSKAKYGYWDFMTDATLD 300

Qy 283 QSPSFE--RAGDEYSAMSSHEYPSSLTDDKNPDNNDYEGHSSEFTVDFSKSLTGG 340
Db 301 NKYTDLPGIARQOTWRSLVSTDEYATLLTDKNKPSDYNAGYHSSSEFDVNFADKKIKG 360

Qy 341 LFSNLQDHHKGVTKTKRYDINARHGNFRGSATANKONESKAKHPFTSDADRLEG 400
Db 361 LISN--QLSGTAVTAKERYKEADHGNFRGSATASDAEDSKTQHPFTSDATNKLEGG 418

Qy 401 FYGNAEELAGKFTLDDNKLFGVGAQESBAKTEALDAYALGTFNKSGTTNPA--FT 458
Db 419 FYGPKGEELAGKFTLDDNKLFGVGAQKRD--KVEKTEALDAYALGTFN--NTNKATFTT 474

Qy 459 ANSKKELDNFGNKLVLGSTVIDLTQ---GNDFVKTIIDKEKATTTNQAGEPLTVNDK 514
Db 475 PFTXKQLDNFGNAKLVLGSTVINLVSTDTATKNFEFTKFTDKPTTSATNKAGETLWVND 534

Qy 515 VRVQCCSNLEHLFGSLISGDSNVFLQGBERTATKGDKAMPVAGNAKYRGTWAGYVA 574
Db 535 VIVTKYGNFYLKFGELSGDSHVSFLQGBERTATTG--EKAVPTTGAKYLGNNVGYIT 592

Qy 575 GSGNTSKAYEAQFADNANRAEFVDVFANKSLTGKLIPTNSDGSKAFDITATIDNGNFS 634
Db 593 GAGTGKSPNEAQDIAD-----FDIDFERKSVKGLITQGRTD--PVENIKGEIAGNGWT 644

Qy 635 GKANTPDJETGLKIDSKNSRGR--VIVKDAIVGGFGYGPQANELGGSFTYKSNDAQNOD 693
Db 645 GKASTTKADAGGYKIDS--SSGTGKSIVENAEVTTGGFYGPANEMGGSFTHDTD----- 696

; 694 KDSASVWFGARKQOEYK 711
; |||||:|||||
; 697 -DSKASVWFGTKRQOEYK 713
; |||||:|||||

RESULT 8
US-09-059-584-49
; Sequence 49, Application US/09059584
; Patent No. 6440701
; GENERAL INFORMATION:
; APPLICANT: Myers, Lisa E
; APPLICANT: Schryvers, Anthony B
; APPLICANT: Harkness, Robin E
; APPLICANT: Loosmore, Sheena M.
; APPLICANT: Du, Run-Pan
; APPLICANT: Yang, Yan-Ping
; APPLICANT: Klein, Michel H
; TITLE OF INVENTION: Transferrin Receptor Genes of Moraxella
; NUMBER OF SEQUENCES: 60
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Sim & McBurney
; STREET: 6th Floor, 330 University Avenue
; CITY: Toronto
; STATE: Ontario
; COUNTRY: Canada
; ZIP: M5G 1R7
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/09/059,584
; FILING DATE: 14-APR-1998
; CLASSIFICATION:
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/778,570
; FILING DATE: 03-JAN-1997
; CLASSIFICATION:
; ATTORNEY/AGENT INFORMATION:
; NAME: Stewart, Michael I
; REGISTRATION NUMBER: 24973
; REFERENCE/DOCKET NUMBER: 1038-794
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (416) 595-1155
; TELEFAX: (416) 595-1163
; INFORMATION FOR SEQ ID NO: 49:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 713 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; US-09-059-584-49

Query Match 51.8%; Score 1922; DB 4; Length 713;
Best Local Similarity 55.8%; Pred. No. 2.4e-130;
Matches 411; Conservative 96; Mismatches 181; Indels 48; Gaps 21;

Qy 1 MKHIPLTLCVAISAVLLTACGGSGSNPPAPTPIPNAGGAGNAGSTGGAGSTDNANA 60
Db 1 MKHIPLTLCVAISAVLLTACGGSGSNPPAPTPIPNASGSGNTGN--TGNAGGTDNTANA 59

Qy 61 GSTGAGSGTGSASTQPKYQDVPTDKNKKDEVSGIOEPAMGYVELKLRNWIPEQEEH 120
Db 60 GNTGSGTGSASTSPKQDVPTTNNKEQVSSIOEPAMGYGMAKSKINLYDQD--- 116

Qy 121 AKINTNDVVKLEG-----DLKHPDFNSIWQNIKNSKEVQTVYQEKQNIENQIKKE 172
Db 117 TPLDAKNIITLDGKKQVADNOKSPLPFSL--DVENKLLDGYIAKMWKADKNAIGERIKRE 174

Qy 173 NKELDKTALKALIEKVLDDYLTSLAKPIYEKNIND-----SHDKONKARTDRLKYRS 225
Db 175 NEQNKKISDEBLAKIKENVRKS---PEFOQVLLSSIKAKTTPHSDNKTTRDRLKYVDY 231
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; GENERAL INFORMATION:
; APPLICANT: Myers, Lisa E
; APPLICANT: Schryvers, Anthony B
; APPLICANT: Harkness, Robin E
; APPLICANT: Loosmore, Sheena M.
; APPLICANT: Du, Run-Pan
; APPLICANT: Yang, Yan-Ping
; APPLICANT: Klein, Michel H
; TITLE OF INVENTION: Transferrin Receptor Genes of Moraxella
; NUMBER OF SEQUENCES: 31
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Sim & McBurney
; STREET: 6th Floor, 330 University Avenue
; CITY: Toronto
; STATE: Ontario
; COUNTRY: Canada
; ZIP: M5G 1R7
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/613.009A
; FILING DATE: 08-MAR-1996
; CLASSIFICATION: 435
; ATTORNEY/AGENT INFORMATION:
; NAME: Stewart, Michael I
; REGISTRATION NUMBER: 24973
; REFERENCE/DOCKET NUMBER: 1038-542
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (416) 595-1155
; TELEFAX: (416) 595-1163
; INFORMATION FOR SEQ ID NO: 9:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 702 amino acids
; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; US-08-613-009A-9

Query Match 49.9%; Score 1851.5; DB 3; Length 702;
Best Local Similarity 54.8%; Pred. No. 2.8e-125;
Matches 401; Conservative 96; Mismatches 184; Indels 51; Gaps 21;

Qy 1 MKHPLTTLCAISAVLLTACGGSGSNPPAPTIPNAGGAGNAGSGTGGAGSTDAANA 60
Db 1 MKHPLTTLCAISAVLLTACGGSGSNPPAPTIPNAGGAGNAGSGTGGAGSTDAANA 59
Qy 61 GSTGASGSGTASQPKYQDVPTDKNKKDEVGSGIOEPAMGYGVELKLRNWIPOE 120
Db 60 GNTGTSNGSGSANTPEPKQDVPTDKNKKDEVGSGIOEPAMGYGVELKLRNWIPOE 116
Qy 121 AKINTNDVVKLEG-----DLKHPFDNSIMONIKN---SKEVQTVYNOEKONIE 172
Db 117 TPLDEKNIITLDGKKQVAEGKKSPLPSL--DVENKLLDGYIAKMNVAADKNAIG 174
Qy 173 NKEL-DKTALKALIEKV-----LDDYLTSLAKPIYEKNINDSHDKQKARTDLKY 226
Db 175 NKEISDELAKQIKAEVRKSHFEQOVLSSLNKKIFHSN-----DGTTKATTRDL 229
Qy 227 YIYRSGYSNIDIQ-KKIAKTGDFDCAIFYKGTQTAQKOLPVSE-VKYKGTWDFMTD 283
Db 230 YYLANDGNLTVTKDKLWNLGVGVYNGTTHAKELPTQDAVKYKHWFMTDVARNR 289
Qy 284 SFSSFER--RAGDYSAMSHSEYPSLLTDDKNKPDNYNDYHGSSEFTVDFSKSLT 341
Db 290 RFSEVKENSQAGWYGYGASSKDEYNRLTKEADSDPDGSHGSEYHGSSEFTVDF 349
Qy 342 FSNLODHKHKVTKTKYDINARHGNFRGSAATANKDNESKAKHPTSDADNLEGGF 401
Db 350 FSNLODRHKGNVTKTERYDIDANIHGNFRGSAATANKDNES--KHPFTSDANNR 407

US-08-673-133-4.ra1
; Sequence 11, Application US/08778570B
; Patent No. 6437096
; GENERAL INFORMATION:
; APPLICANT: Myers, Lisa E
; APPLICANT: Schryvers, Anthony B
; APPLICANT: Harkness, Robin E
; APPLICANT: Loosmore, Sheena M.
; APPLICANT: Du, Run-Pan
; APPLICANT: Yang, Yan-Ping
; APPLICANT: Klein, Michel H
; TITLE OF INVENTION: Transferrin Receptor Genes of Moraxella
; NUMBER OF SEQUENCES: 43
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Sim & McBurney
; STREET: 6th Floor, 330 University Avenue
; CITY: Toronto
; STATE: Ontario
; COUNTRY: Canada
; ZIP: M5G 1R7
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/778,570B
; FILING DATE: 03-JAN-1997
; CLASSIFICATION: 536
; ATTORNEY/AGENT INFORMATION:
; NAME: Stewart, Michael I
; REGISTRATION NUMBER: 24973
; REFERENCE/DOCKET NUMBER: 1038-664
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (416) 595-1155
; TELEFAX: (416) 595-1163
; INFORMATION FOR SEQ ID NO: 11:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 702 amino acids
; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; US-08-778-570B-11

Query Match 49.9%; Score 1851.5; DB 4; Length 702;
Best Local Similarity 54.8%; Pred. No. 2.8e-125;
Matches 401; Conservative 96; Mismatches 184; Indels 51; Gaps 21;

402 YGPNABELAGKFLTDDNKLFGVGAKESEAKE-TEAILDAYALGTNFKSGTTNPAFTAN 460
Db 408 YGPKGEELAGKFLTNDNKLFGVGAKESEAKE-TEAILDAYALGTNFKSGTTNPAFTAN 465
Qy 461 SKELDNFGNINKLVLGSTVIDLTQGNDFVKTIDKEXPATTTNOAGHPLTVNDKRVQVC 520
Db 466 TEKQDNFGNAXKLVLGSTVIDLVPTDATKNEFTKDKPESATNAGETLMVNDSESVKTY 525
Qy 521 CSNLEHLKFGSLSTGDSNSVFLQGERATATKGDKDKAMPVAGNAKYRGTWAGYVAGSGNTS 580
Db 526 GKNFELKFGELSGGSHSVFLQGERATATG--EKAVPTTGTAKYLGWVGYITGKDTGT 583
Qy 581 KAYEAQOFADNANRAEFVDVFNKSLGKLPNTSSDGKSAFDITATIDGNGFSGKANTP 640
Db 584 GT--GKSFTDAQDVADFDIDFGNKSVSGLITKGRQD--PVFSITGQIAGNGWTGASTT 639
Qy 641 DIETGGLKIDSKNSQESGR-VIVKDAIVIGGYFQGANELGSGFTYKSNNDAGNQDKDSAS 699
Db 640 KADAGGYKIDS--SSTGKSIVIKDANVTGGFYGNANEMGGSFTHNAD-----DSKAS 690
Qy 700 VFGARKQOEK 711
Db 691 VFGTKRQOEK 702

RESULT 11
US-08-778-570B-11
; Sequence 11, Application US/08778570B
; Patent No. 6437096
; GENERAL INFORMATION:
; APPLICANT: Myers, Lisa E
; APPLICANT: Schryvers, Anthony B
; APPLICANT: Harkness, Robin E
; APPLICANT: Loosmore, Sheena M.
; APPLICANT: Du, Run-Pan
; APPLICANT: Yang, Yan-Ping
; APPLICANT: Klein, Michel H
; TITLE OF INVENTION: Transferrin Receptor Genes of Moraxella
; NUMBER OF SEQUENCES: 43
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Sim & McBurney
; STREET: 6th Floor, 330 University Avenue
; CITY: Toronto
; STATE: Ontario
; COUNTRY: Canada
; ZIP: M5G 1R7
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/778,570B
; FILING DATE: 03-JAN-1997
; CLASSIFICATION: 536
; ATTORNEY/AGENT INFORMATION:
; NAME: Stewart, Michael I
; REGISTRATION NUMBER: 24973
; REFERENCE/DOCKET NUMBER: 1038-664
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (416) 595-1155
; TELEFAX: (416) 595-1163
; INFORMATION FOR SEQ ID NO: 11:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 702 amino acids
; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; US-08-778-570B-11
```


QY 1 MKHPLTLTLCVAISAVLLTACGGSGSNPPAPPTIPNAGGAGNAGSGTGGAGSTDNANA 60
 DB 1 MKHPLTLTLCVAISAVLLTACGGSGSNPPAPPTIPNAGGAGNAGSGTGGAGSTDNANA 59
 QY 61 GSTGAGSGTGSASTQPKYQDVPTDKNKGDEVSIGQEPAMGYGVELKLRNWIPOQBEH 120
 DB 60 GNTGTSNGTGSANTPEPKYQDVPTDKNKGDEVSIGQEPAMGYGVELKLRNWIPOQBEH 116
 QY 121 AKINTNDVVKLEG-----DLKHPFDSINQNIKN---SKEVQTVYNOEKQNIENQIKKE 172
 DB 117 TPLDEKNIITLDGKKQVAEGKSPPLPSL--DVENKLLDGYIAKNVADKNAIGDRIKKG 174
 QY 173 NKEISDEELAKQIKEAVRKSHEFQVLSLENKIFHSN-----DGTTKATTTRDLKYVDYG 229
 DB 175 NKEISDEELAKQIKEAVRKSHEFQVLSLENKIFHSN-----DGTTKATTTRDLKYVDYG 229
 QY 227 YIYRSGYSNIDIO-KKIATKTGDFGALFYKGTQTAQKLPVSE-VKYKGTWDFMTD-AKKGQ 283
 DB 230 YILANDGNLYTVKTDKLNILGVPVGGVYNGITTTAKELPTQDAVKYKGHWDFMTDVANERN 289
 QY 284 SFSPFER--RAGDRYSAMSSHEYPSSLTDDKNKPDNYNDEYGHSEFTVDFSKSLTGGL 341
 DB 290 RFSEVKENSQAGWYGYGASSKDEYNRLTKEDSAPDGHSGSEYCHSEFTVDFSKSLTGGL 349
 QY 342 FSNLQDHHKGVTKTRYDINARHGNFRGSATANKDNESKAKHPETSADNRLEGGF 401
 DB 350 FSNLQDHHKGVTKTRYDINARHGNFRGSATANKDNESKAKHPETSADNRLEGGF 407
 QY 402 YGPNABELAGKFLTDDNKLFGVGAKESEAKE--TEALDAYALGTGFKSGTTPNPAFTAN 460
 DB 408 YGPNABELAGKFLTDDNKLFGVGAKESEAKE--TEALDAYALGTGFKSGTTPNPAFTAN 465
 QY 461 SKKELDNFGNINKLVLGSTVIDLTQGNDFVKTIDKEKPAATTNQAAGEPLTVNDKVRQVC 520
 DB 466 TEKQDNFGNINKLVLGSTVIDLTQGNDFVKTIDKEKPAATTNQAAGEPLTVNDKVRQVC 525
 QY 521 CSNLEHLKFGSLSGDSNSVFLQERTATKDKKAMPVAGNAGYRGTWAGYVAGSGNTS 580
 DB 526 GKPFYLLKFGSLSGDSNSVFLQERTATKDKKAMPVAGNAGYRGTWAGYVAGSGNTS 583
 QY 581 KAYEAQPADNANRAEFVDVDFANKSLTGLKIPNTSSDGKSAFDITATIDGNGFSGKANTP 640
 DB 584 GT--GKSTFDAQVADFDIFGNSVSKLITKGRD--PVFSITGQIAGNGWTGTASTT 639
 QY 641 DIETGGLKIDSKNESGR-VIVKDAIVIGGYGPOANELGSGFTYKSNDAQNKDQSSAS 699
 DB 640 KADAGGYKIDS--SSTGKSIKIDANVTGGFYGNANEMGSGFTHNAD-----DSKAS 690
 QY 700 VVFGARKQOEK 711
 DB 691 VVFGTKRQOEK 702

RESULT 12

US-09-059-584-11
 ; Sequence 11, Application US/09059584
 ; Patent No. 6440701

GENERAL INFORMATION:

APPLICANT: Myers, Lisa E
 APPLICANT: Schryvers, Anthony B
 APPLICANT: Harkness, Robin E
 APPLICANT: Loosmore, Sheena M.
 APPLICANT: Du, Run-Pan
 APPLICANT: Yang, Yan-Ping
 APPLICANT: Klein, Michel H
 TITLE OF INVENTION: Transferrin Receptor Genes of Moraxella
 NUMBER OF SEQUENCES: 60
 CORRESPONDENCE ADDRESS:
 ADDRESSEE: Sim & McBurney
 STREET: 6th Floor, 330 University Avenue
 CITY: Toronto
 STATE: Ontario

QY 1 MKHPLTLTLCVAISAVLLTACGGSGSNPPAPPTIPNAGGAGNAGSGTGGAGSTDNANA 60
 DB 1 MKHPLTLTLCVAISAVLLTACGGSGSNPPAPPTIPNAGGAGNAGSGTGGAGSTDNANA 59
 QY 61 GSTGAGSGTGSASTQPKYQDVPTDKNKGDEVSIGQEPAMGYGVELKLRNWIPOQBEH 120
 DB 60 GNTGTSNGTGSANTPEPKYQDVPTDKNKGDEVSIGQEPAMGYGVELKLRNWIPOQBEH 116
 QY 121 AKINTNDVVKLEG-----DLKHPFDSINQNIKN---SKEVQTVYNOEKQNIENQIKKE 172
 DB 117 TPLDEKNIITLDGKKQVAEGKSPPLPSL--DVENKLLDGYIAKNVADKNAIGDRIKKG 174
 QY 173 NKEISDEELAKQIKEAVRKSHEFQVLSLENKIFHSN-----DGTTKATTTRDLKYVDYG 229
 DB 175 NKEISDEELAKQIKEAVRKSHEFQVLSLENKIFHSN-----DGTTKATTTRDLKYVDYG 229
 QY 227 YIYRSGYSNIDIO-KKIATKTGDFGALFYKGTQTAQKLPVSE-VKYKGTWDFMTD-AKKGQ 283
 DB 230 YILANDGNLYTVKTDKLNILGVPVGGVYNGITTTAKELPTQDAVKYKGHWDFMTDVANERN 289
 QY 284 SFSPFER--RAGDRYSAMSSHEYPSSLTDDKNKPDNYNDEYGHSEFTVDFSKSLTGGL 341
 DB 290 RFSEVKENSQAGWYGYGASSKDEYNRLTKEDSAPDGHSGSEYCHSEFTVDFSKSLTGGL 349
 QY 342 FSNLQDHHKGVTKTRYDINARHGNFRGSATANKDNESKAKHPETSADNRLEGGF 401
 DB 350 FSNLQDHHKGVTKTRYDINARHGNFRGSATANKDNESKAKHPETSADNRLEGGF 407
 QY 402 YGPNABELAGKFLTDDNKLFGVGAKESEAKE--TEALDAYALGTGFKSGTTPNPAFTAN 460
 DB 408 YGPNABELAGKFLTDDNKLFGVGAKESEAKE--TEALDAYALGTGFKSGTTPNPAFTAN 465
 QY 461 SKKELDNFGNINKLVLGSTVIDLTQGNDFVKTIDKEKPAATTNQAAGEPLTVNDKVRQVC 520
 DB 466 TEKQDNFGNINKLVLGSTVIDLTQGNDFVKTIDKEKPAATTNQAAGEPLTVNDKVRQVC 525
 QY 521 CSNLEHLKFGSLSGDSNSVFLQERTATKDKKAMPVAGNAGYRGTWAGYVAGSGNTS 580
 DB 526 GKPFYLLKFGSLSGDSNSVFLQERTATKDKKAMPVAGNAGYRGTWAGYVAGSGNTS 583
 QY 581 KAYEAQPADNANRAEFVDVDFANKSLTGLKIPNTSSDGKSAFDITATIDGNGFSGKANTP 640
 DB 584 GT--GKSTFDAQVADFDIFGNSVSKLITKGRD--PVFSITGQIAGNGWTGTASTT 639
 QY 641 DIETGGLKIDSKNESGR-VIVKDAIVIGGYGPOANELGSGFTYKSNDAQNKDQSSAS 699
 DB 640 KADAGGYKIDS--SSTGKSIKIDANVTGGFYGNANEMGSGFTHNAD-----DSKAS 690
 QY 700 VVFGARKQOEK 711
 DB 691 VVFGTKRQOEK 702

Query Match 49.9% Score 1851.5; DB 4; Length 702;
 Best Local Similarity 54.8%; Pred. No. 2.8e-125;
 Matches 401; Conservative 96; Mismatches 184; Indels 51; Gaps 21;

QY 1 MKHPLTLTLCVAISAVLLTACGGSGSNPPAPPTIPNAGGAGNAGSGTGGAGSTDNANA 60
 DB 1 MKHPLTLTLCVAISAVLLTACGGSGSNPPAPPTIPNAGGAGNAGSGTGGAGSTDNANA 59
 QY 61 GSTGAGSGTGSASTQPKYQDVPTDKNKGDEVSIGQEPAMGYGVELKLRNWIPOQBEH 120
 DB 60 GNTGTSNGTGSANTPEPKYQDVPTDKNKGDEVSIGQEPAMGYGVELKLRNWIPOQBEH 116
 QY 121 AKINTNDVVKLEG-----DLKHPFDSINQNIKN---SKEVQTVYNOEKQNIENQIKKE 172
 DB 117 TPLDEKNIITLDGKKQVAEGKSPPLPSL--DVENKLLDGYIAKNVADKNAIGDRIKKG 174
 QY 173 NKEISDEELAKQIKEAVRKSHEFQVLSLENKIFHSN-----DGTTKATTTRDLKYVDYG 229
 DB 175 NKEISDEELAKQIKEAVRKSHEFQVLSLENKIFHSN-----DGTTKATTTRDLKYVDYG 229
 QY 227 YIYRSGYSNIDIO-KKIATKTGDFGALFYKGTQTAQKLPVSE-VKYKGTWDFMTD-AKKGQ 283
 DB 230 YILANDGNLYTVKTDKLNILGVPVGGVYNGITTTAKELPTQDAVKYKGHWDFMTDVANERN 289
 QY 284 SFSPFER--RAGDRYSAMSSHEYPSSLTDDKNKPDNYNDEYGHSEFTVDFSKSLTGGL 341
 DB 290 RFSEVKENSQAGWYGYGASSKDEYNRLTKEDSAPDGHSGSEYCHSEFTVDFSKSLTGGL 349
 QY 342 FSNLQDHHKGVTKTRYDINARHGNFRGSATANKDNESKAKHPETSADNRLEGGF 401
 DB 350 FSNLQDHHKGVTKTRYDINARHGNFRGSATANKDNESKAKHPETSADNRLEGGF 407
 QY 402 YGPNABELAGKFLTDDNKLFGVGAKESEAKE--TEALDAYALGTGFKSGTTPNPAFTAN 460
 DB 408 YGPNABELAGKFLTDDNKLFGVGAKESEAKE--TEALDAYALGTGFKSGTTPNPAFTAN 465
 QY 461 SKKELDNFGNINKLVLGSTVIDLTQGNDFVKTIDKEKPAATTNQAAGEPLTVNDKVRQVC 520
 DB 466 TEKQDNFGNINKLVLGSTVIDLTQGNDFVKTIDKEKPAATTNQAAGEPLTVNDKVRQVC 525
 QY 521 CSNLEHLKFGSLSGDSNSVFLQERTATKDKKAMPVAGNAGYRGTWAGYVAGSGNTS 580
 DB 526 GKPFYLLKFGSLSGDSNSVFLQERTATKDKKAMPVAGNAGYRGTWAGYVAGSGNTS 583

TELECOMMUNICATION INFORMATION:
 TELEPHONE: (416) 595-1155
 TELEFAX: (416) 595-1163
 INFORMATION FOR SEQ ID NO: 25:
 SEQUENCE CHARACTERISTICS:
 LENGTH: 702 amino acids
 TYPE: amino acid
 STRANDEDNESS: single
 TOPOLOGY: linear
 US-09-074-658-25

Query Match 49.8%; Score 1847.5; DB 3; Length 702;
 Best Local Similarity 54.8%; Pred. No. 5.5e-125;
 Matches 401; Conservative 95; Mismatches 185; Indels 51; Gaps 21;

Qy 1 MKHPLTTLCAISAVLLTACGGSGSNPPPTPIPNAGGAGNAGSGTGGAGSTDDNAANA 60
 Db 1 MKHPLTTLCAISAVLLTACGGSGSNPPPTPIPNAGGAGNAGSGTGGAGSTDDNAANA 59

Qy 61 GSTCGASSGTGASTOKPKYQDPTDKKKDEVSGIQEPAMGYGVELKLRNWIPOEQUEH 120
 Db 60 GNTGGTSGTGSANTPEPKYQDPTDKKKDEVSGIQEPAMGYGVELKLRNWIPOEQUEH 116

Qy 121 AKINTNDVVKLEG-----DLKHPFDNSIWONIKN---SKEVQTVYNOEKONIENIKKE 172
 Db 117 TPLDEKNIITLDGKKQVAGKKSPLPPLSL--DVENKLLDGYIAKNNVADKNAIGDRKKG 174

Qy 173 NKEL-DKTALKALIEKV-----LDDYLTSLAKPIYERKINDSHDKONKARTDRLKYRSG 226
 Db 175 NKEISDELAQIKAEAVRKSHEFQVQLSSLENKIFHSN-----DGTTKATTRDLKYVDYG 229

Qy 227 YIYRSGVSNIDIQ-KKIAGTQFDGALFYKGTQTAQKLPVSE-VYKGTWDFMTD-AKKGQ 283
 Db 230 YLLANDGNLYLVKTDKLNGLPVGVGYNGTGTAKELPTQDAVKYKGHWDFMTDVANRN 289

Qy 284 SFSSFER--RAGDRYSAMSHSEYPSLLTDDKKNPDYNDVYGHSSSEFTVDFSKSLTGL 341
 Db 290 RFSEVKENSQAGWYGGASSKDEYNRLTKEDSADGHSGEYGHSSSEFTVDFSKSLTGL 349

Qy 342 FSNLQDHHKGVTKTKRYDINARIHGNRFRGSATAINKDNESKAKHPFTSDADNRLEGF 401
 Db 350 FSNLQDRHKGNTVTKERYDIDANIHGNRFRGSATASNKNDTS--KHPTSDANNRLEGF 407

Qy 402 YGNABELAGLFTDDNKLFGVFGAKQSEAKE--TEALIDAYALGTNKGSTTTPAFTAN 460
 Db 408 YGPKGEELAGLFTNDNKLFGVFGAKRESKAEKTEALIDAYALGTNTSNT--TETPF 465

Qy 461 SKKELDNFGNTKLVGSLTVDLTQGNDFVKTIDKEKPAITTNQAGBELTVNDKVRQVC 520
 Db 466 TEKQLDNFGNAKLVGSLTVDLTQGNDFVKTIDKEKPAITTNQAGBELTVNDKVRQVC 525

Qy 521 CSNLEHLKFGSLSDNSVFLQBERTATKGDKDKAMPVAGNAYRGVTWAGYVAGSGNVS 580
 Db 526 GKNFEYLKFGELSGSHSVFLOGERTATTG--EKAVPTTGATKYLGNWVYITGKTGT 583

Qy 581 KAYEAQFADNANRAEFVDVPANKSLTKLIPNTSSDGKSAFDITATIDGNGFGSKANTP 640
 Db 584 GT--GKSPDQADVDFIDFGNSVSKLITKGRQD--PVFSITQIAGNGWGTGTASTT 639

Qy 641 DIETGGLKIDSKNSESGR-VIVKDAIVIGGFYQANLGGSFYKSNDAQNDKDSAS 699
 Db 640 KADAGGYKIDS--SSTGKSAIKDANVTGGFYGNANEMGSGFTNAD-----DSKAS 690

Qy 700 VVFGARKQOEK 711
 Db 691 VVFGTKRQOEK 702

RESULT 15
 US-08-613-009A-10
 Sequence 10, Application US/08613009A
 Patent No. 6090576
 GENERAL INFORMATION:

APPLICANT: Myers, Lisa E
 APPLICANT: Schryvers, Anthony B
 APPLICANT: Harkness, Robin E
 APPLICANT: Loosmore, Sheena M.
 APPLICANT: Du, Run-Pan
 APPLICANT: Yang, Yan-Ping
 APPLICANT: Klein, Michel H
 TITLE OF INVENTION: Transferrin Receptor Genes of Moraxella
 NUMBER OF SEQUENCES: 31
 CORRESPONDENCE ADDRESS:
 ADDRESSEE: Sim & McBurney
 STREET: 6th Floor, 330 University Avenue
 CITY: Toronto
 STATE: Ontario
 COUNTRY: Canada
 ZIP: M5G 1R7
 COMPUTER READABLE FORM:
 MEDIUM TYPE: Floppy disk
 COMPUTER: IBM PC compatible
 OPERATING SYSTEM: PC-DOS/MS-DOS
 SOFTWARE: Patentin Release #1.0, Version #1.30
 CURRENT APPLICATION DATA:
 APPLICATION NUMBER: US/08/613,009A
 FILING DATE: 08-MAR-1996
 CLASSIFICATION: 435
 ATTORNEY/AGENT INFORMATION:
 NAME: Stewart, Michael I
 REGISTRATION NUMBER: 24973
 REFERENCE/DOCKET NUMBER: 1038-542
 TELECOMMUNICATION INFORMATION:
 TELEPHONE: (416) 595-1155
 TELEFAX: (416) 595-1163
 INFORMATION FOR SEQ ID NO: 10:
 SEQUENCE CHARACTERISTICS:
 LENGTH: 682 amino acids
 TYPE: amino acid
 STRANDEDNESS: single
 TOPOLOGY: linear
 US-08-613-009A-10

Query Match 47.3%; Score 1754.5; DB 3; Length 682;
 Best Local Similarity 53.5%; Pred. No. 2.7e-118;
 Matches 381; Conservative 96; Mismatches 184; Indels 51; Gaps 21;

Qy 21 CGSGGSGNPPPTPIPNAGGAGNAGSGTGGAGSTDDNAANAGSGTGGAGSGTGSASTQPKY 80
 Db 1 CGSGGSGNPPPTPIPNAGGAGNAGSGTGGAGSTDDNAANAGSGTGGAGSGTGSASTQPKY 59

Qy 81 QDVPTDKKKDEVSGIQEPAMGYGVELKLRNWIPOEQUEHAKINTNDVVKLEG-----DL 135
 Db 60 QDVPTDKKKDEVSGIQEPAMGYGVELKLRNWIPOEQUEHAKINTNDVVKLEG-----DL 135

Qy 136 KHPFDNSIWONIKN---SKEVQTVYNOEKONIENIKKEL-DKTALKALIEKV--- 188
 Db 117 KKSPLPPLSL--DVENKLLDGYIAKNNVADKNAIGDRKKNKEISDELAQIKAEVRS 174

Qy 189 --LDDYLTSLAKPIYERKINDSHDKONKARTDRLKYRSGYIYRSGVSNIDIQ-KKIAGT 245
 Db 175 HEFQVQLSSLENKIFHSN-----DGTTKATTRDLKYVDYGYVLLANDGNLYLVKTDKLNWL 229

Qy 246 GFDGALFYKGTQTAQKLPVSE-VYKGTWDFMTD-AKKGSGFSFER--RAGDRYSAMSS 301
 Db 230 GPVGVGYNGTGTAKELPTQDAVKYKGHWDFMTDVANRRNRFSEVKENSQAGWYTGASSK 289

Qy 302 HEYPSLLTDDKKNPDYNDVYGHSSSEFTVDFSKSLTGGLPFNSIQDHHKGVTKTKRYDI 361
 Db 290 DEYNRLTKEDSADGHSGEYGHSSSEFTVDFSKSLTGGLPFNSIQDHHKGVTKTKRYDI 349

Qy 362 NARIHGNRFRGSATAINKDNESKAKHPFTSDADNRLEGFYGPNABELAGLFTDDNKL 421
 Db 350 DANIHGNRFRGSATASNKNDTS--KHPTSDANNRLEGFYGPKGEELAGLFTDDNKL 407

Qy 422 GVFGAKQSEAKE--TEALIDAYALGTNKGSTTTPAFTANSKELDNKLVGSLTV 480

Db 408 GVFGAKRESKAEKTEALDAYALGTFTSNTAT--TFTPTTEKQDNDNFNAKLVLGSTV 465
Qy 481 IDLTQGNDFVKTIDKEKPAITNOAGEPLTVNDKVRVQVCCSNLEHLKFGSLSGDSNSV 540
Db 466 IDLVPTDATNEFTKDKPESATNAGETLWVNDVSVKTYGKNPEYLKFGSLSGGSHSV 525
Qy 541 FLOQERTATKGDOKAMPVAGNAKYRTGWTWAGVAGSGNTSKAYEAOQFADNANRAEPDVD 600
Db 526 FLOQERTATTG--EKAVPTTGTAKYLGNNVGYITGKTGTGT--GKSPDADQVADFDID 581
Qy 601 FANKSLTKLIPNTSSDGKSAFDITATIDGNGFSGKANTPDIETGGLKIDSKNSSEGR-V 659
Db 582 FGNKSVSGKLITKGRQD--PVFSITGTAGNGWTGTASTTTKADAGGYKIDS--SSTGSKI 637
Qy 660 IVKDAIVIGFGYPOANELGSGFTYKSNDAQNDQKDSASVVFGARQOEYK 711
Db 638 VIKDANVTGGYGPANEMGGSFTHNAD-----DSKASVVFGTGRQOEYK 682

RESULT 16
US-08-778-570B-12
; Sequence 12, Application US/08778570B
; Patent No. 6437096
; GENERAL INFORMATION:
; APPLICANT: Myers, Lisa E
; APPLICANT: Schryvers, Anthony B
; APPLICANT: Harkness, Robin E
; APPLICANT: Loosmore, Sheena M.
; APPLICANT: Du, Run-Pan
; APPLICANT: Yang, Yan-Ping
; APPLICANT: Klein, Michel H
; TITLE OF INVENTION: Transferrin Receptor Genes of Moraxella
; NUMBER OF SEQUENCES: 43
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Sim & McBurney
; STREET: 6th Floor, 330 University Avenue
; CITY: Toronto
; STATE: Ontario
; COUNTRY: Canada
; ZIP: M5G 1R7
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/778,570B
; FILING DATE: 03-JAN-1997
; CLASSIFICATION: 536
; ATTORNEY/AGENT INFORMATION:
; NAME: Stewart, Michael I
; REGISTRATION NUMBER: 24973
; REFERENCE/DOCKET NUMBER: 1038-664
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (416) 595-1155
; TELEFAX: (416) 595-1163
; INFORMATION FOR SEQ ID NO: 12:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 682 amino acids
; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear
US-08-778-570B-12

Query Match 47.3%; Score 1754.5; DB 4; Length 682;
Best Local Similarity 53.5%; Pred. No. 2.7e-118;
Matches 381; Conservative 96; Mismatches 184; Indels 51; Gaps 21;

Qy 21 CGSGGSGNPPAPTPIPNAGGAGNAGSGTGGAGSTDAANAGSTGAGSGTGSASTOKPKY 80
Db 1 CGSGGSGNPPAPTPIPNAGGAGNAGSGTGGAGSTDAANAGTGTGAGTGSAGTGSANTPEPKY 59

Qy 81 QDVPTDKKDEVSIGIQEPAMGYGVELKLRNWIPOQOEHEHAKINTNDVVKLEG-----DL 135
Db 60 QDVPTKNEKDKVSSIQEPAMGYGMAKSKIN---LHNRQDTPLDKXNIITLDGKKQVAEG 116
Qy 136 KHNPPDINSIQWNIQN---SKEVQTVYNOEKONIEQIKENKEL-DKTALKALIEKV--- 188
Db 117 KXSLPPLPSL--DVNKLKLDGVIAKNNVADKNAIGDRICKGNKEISDBELAKQIKEAVRKS 174
Qy 189 --LDYITSLAKPIYEKNIINDSHDKONKARTDILKYVRSYIYRSGYSNIDIQ-KKIAKT 245
Db 175 HEFOQVLSLLENKIFHSN-----DGTTKATTRDLKYVDYGYLLANDGNLYLTVTKDLKWL 229
Qy 246 GFDGALFYKGTQTAQQLPVSE-VKYKGTWDFMTD-AKKGOSFSSFER--RAGDRYSAMSS 301
Db 230 GPVGGVYNGTGTAKELPTQDAVKYKHWDFMTDVANRRNRFBSVKENSQAGWYYGASSK 289
Qy 302 HEYPSLITDDKKNPDNDYDEGHSSSEFTVDFSKSLTGGFLPSNLQDHHKGVTKTVYDI 361
Db 290 DEYNRLLTKEDSAPDGHSGHSGSEFTVDFSKSLTGGFLPSNLQDHHKGVTKTVYDI 349
Qy 362 NARIHGNRFRGSATAINKDNESKAKHPPTSDADNRLEGFPYGPNAEELAGKFLTDDNKL 421
Db 350 DANIHGNRFRGSATASNKNDTS--KHFTSDANNRLEGFPYGPKEELAGKFLTNDNKL 407
Qy 422 GVFGAKOESBAKE-TEALDAYALGTFTKSGTTPAFTANSKKELDNFGNINKLVLGSTV 480
Db 408 GVFGAKRESKAEKTEALDAYALGTFTSNTAT--TFTPTTEKQDNDNFNAKLVLGSTV 465
Qy 481 IDLTQGNDFVKTIDKEKPAITNOAGEPLTVNDKVRVQVCCSNLEHLKFGSLSGDSNSV 540
Db 466 IDLVPTDATNEFTKDKPESATNAGETLWVNDVSVKTYGKNPEYLKFGSLSGGSHSV 525
Qy 541 FLOQERTATKGDOKAMPVAGNAKYRTGWTWAGVAGSGNTSKAYEAOQFADNANRAEPDVD 600
Db 526 FLOQERTATTG--EKAVPTTGTAKYLGNNVGYITGKTGTGT--GKSPDADQVADFDID 581
Qy 601 FANKSLTKLIPNTSSDGKSAFDITATIDGNGFSGKANTPDIETGGLKIDSKNSSEGR-V 659
Db 582 FGNKSVSGKLITKGRQD--PVFSITGTAGNGWTGTASTTTKADAGGYKIDS--SSTGSKI 637
Qy 660 IVKDAIVIGFGYPOANELGSGFTYKSNDAQNDQKDSASVVFGARQOEYK 711
Db 638 VIKDANVTGGYGPANEMGGSFTHNAD-----DSKASVVFGTGRQOEYK 682

RESULT 17
US-09-059-584-12
; Sequence 12, Application US/09059584
; Patent No. 6440701
; GENERAL INFORMATION:
; APPLICANT: Myers, Lisa E
; APPLICANT: Schryvers, Anthony B
; APPLICANT: Harkness, Robin E
; APPLICANT: Loosmore, Sheena M.
; APPLICANT: Du, Run-Pan
; APPLICANT: Yang, Yan-Ping
; APPLICANT: Klein, Michel H
; TITLE OF INVENTION: Transferrin Receptor Genes of Moraxella
; NUMBER OF SEQUENCES: 60
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Sim & McBurney
; STREET: 6th Floor, 330 University Avenue
; CITY: Toronto
; STATE: Ontario
; COUNTRY: Canada
; ZIP: M5G 1R7
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/09/059,584

;; FILING DATE: 14-APR-1998
;; CLASSIFICATION:
;; PRIOR APPLICATION DATA:
;; APPLICATION NUMBER: US 08/778,570
;; FILING DATE: 03-JAN-1997
;; CLASSIFICATION:
;; ATTORNEY/AGENT INFORMATION:
;; NAME: Stewart, Michael I
;; REGISTRATION NUMBER: 24973
;; REFERENCE/DOCKET NUMBER: 1038-794
;; TELECOMMUNICATION INFORMATION:
;; TELEPHONE: (416) 595-1155
;; TELEFAX: (416) 595-1163
;; INFORMATION FOR SEQ ID NO: 12:
;; SEQUENCE CHARACTERISTICS:
;; LENGTH: 682 amino acids
;; TYPE: amino acid
;; STRANDEDNESS: single
;; TOPOLOGY: linear
US-09-059-584-12

Query Match 47.3%; Score 1754.5; DB 4; Length 682;
Best Local Similarity 53.5%; Pred. No. 2.7e-118;
Matches 381; Conservative 96; Mismatches 184; Indels 51; Gaps 21;
Qy 21 CGSGGSPPPAPTIPNAGGAGNAGSGTGGAGSTDNANAGSTGASSTGASSTQKPKY 80
Db 1 CGSGGSPPPAPTIPNAGGAGNAGSGTGGAGSTDNANAGSTGASSTGASSTQKPKY 59
Qy 81 QDVPTDKNKDEVSGIQPAMGYGVLEKLRNWIPOQEBAHAKINTDNDVVKLEG----DL 135
Db 60 QDVPTDKNKDEVSGIQPAMGYGVLEKLRNWIPOQEBAHAKINTDNDVVKLEG----DL 116
Qy 136 KHPNPDNSIQNKN---SKEVQTVYNOEKQNIENQIKKENKEL-DKTALKALIEKV--- 188
Db 117 KKSPLPFLS--DVENKLDGVIAKXNVADKNAIGDRIKKGNKEISDEBELAQIKEAVRKS 174
Qy 189 --LDYLTSIAKPIYEKINSHDKQKAPTRDLKYVRSYIYRSGVSNIDIQ-KTKAKT 245
Db 175 HEFOQVLSLENKIFHNS-----DGTTKATRDLYVDYGYLYLANDGNGYLVTKDKLWNL 229
Qy 246 GFDCALFYKGTAKQLPVSF-VKYKGTWDPMTD-AKKGQSFSSFER--RAGDRYSAMSS 301
Db 230 GPVGGVFYNGTITAKELPTQAVKYGHWDPMTDVANRRNRPSEVKNSQAGWTYGASK 289
Qy 302 HEYPSLLTDDKNKPDNDYDEYCHSSEFTVDFSKSLTGGLFSLNQLDHHKGGKVTIKRYDI 361
Db 290 DEYNRLLTKEDSAPDGHSGEYCHSSEFTVDFSKSLTGGLFSLNQLDHHKGGKVTIKRYDI 349
Qy 362 NARIHGNFRGSATAINKDNESKAKHPPTSDADNRLEGGFYGPNAEELAGKFLTDDNKLF 421
Db 350 DANIHGNFRGSATASNKNDTS--KHPPTSDANNRLEGGFYGPNAEELAGKFLTDDNKLF 407
Qy 422 GVFGAKQSEAKE-TEALIDAYALGTNKSCTTNPFTANSKELDNFGNINKVLGSLTV 480
Db 408 GVFGAKQSEAKE-TEALIDAYALGTNKSCTTNPFTANSKELDNFGNINKVLGSLTV 465
Qy 481 IDLTQGNDFVKTIDKEKPAATTNOAGEPLTVNDKVRVQVCCSNLEHLKFGSLISGDSNSV 540
Db 466 IDLVPTDATKNEFTWKDEPSATNEAGETLWYNDKVRVQVCCSNLEHLKFGSLISGDSNSV 525
Qy 541 FLOQERTATGDKDKAMPVAGNAYKRGTWAGVAGSGNNTSKAYEAQOFADNANRAEFVD 600
Db 526 FLOQERTATG--EKAVPTTGTAKYLGNNVGYITGKTGTG--GKSFDTAQDQVADFDID 581
Qy 601 FANKSLTGKLIPTNSTDCKSAFDITATIDGNGFSGKANTPDITGGLKIDSKNSGSR-V 659
Db 582 FGNKSVSGKLIYTKGRQD--PVFNITGQIAGNGWTGTASTTKADAGGYKIDS--SSTGSI 637
Qy 660 IVKDAIVTGGFYGPQANELGGSFYTKSNDAGNQDKDSSASVVFVGARKQOEVR 711
Db 638 VIKDANVTGGFYGPANENMGSGSFTHNAD-----DSKSVVFGTKRQOEVR 682

RESULT 18

US-09-540-236-2388
; Sequence 2388, Application US/09540236
; Patent No. 6673910
; GENERAL INFORMATION:
; APPLICANT: Gary L. Breton et al.
; TITLE OF INVENTION: NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING TO MORAXELLA CATAR
; TITLE OF INVENTION: FOR DIAGNOSTICS AND THERAPEUTICS
; FILE REFERENCE: 2709.2005-001
; CURRENT APPLICATION NUMBER: US/09/540.236
; CURRENT FILING DATE: 2000-04-04
; NUMBER OF SEQ ID NOS: 3840
; SEQ ID NO 2388
; LENGTH: 416
; TYPE: PRT
; ORGANISM: M.catarrhalis
US-09-540-236-2388

Query Match 29.3%; Score 1088; DB 4; Length 416;
Best Local Similarity 57.8%; Pred. No. 1.8e-70;
Matches 231; Conservative 41; Mismatches 106; Indels 22; Gaps 9;
Qy 315 PDYNDYVGHSSSEFTVDFSKSLTGGLFSLNQLDHHKGGK-VTKTKRYDINARIHGNRFRGS 373
Db 35 PSNNGAYGHSSSEFDVNFANKKVTGKLISN--QLSGKTVTAKERYKIEADIHGNRFRGS 91
Qy 374 ATAINKDNESKAKHPPTSDADNRLEGGFYGPNAEELAGKFLTDDNKLFVFGAKQESPAK 433
Db 92 AIASEKTDESKKHPPTSDADNRLEGGFYGPNAEELAGKFLTDDNKLFVFGAKQESPAK 151
Qy 434 ETEALIDAYALGTNKSCTTNPFTANSKELDNFGNINKVLGSLTVIDL--TQGNDFVK 491
Db 152 PTEALIDAYALGTNKSCTTNPFTANSKELDNFGNINKVLGSLTVIDLTVPTDATKDVN 209
Qy 492 TIDKEKPAATTNOAGEPLTVNDKVRVQVCCSNLEHLKFGSLISGDSNSVFLQGERTATKG 551
Db 210 EFTKNKPESATNKAGETLWYNDKVRVQVCCSNLEHLKFGSLISGDSNSVFLQGERTATKG 269
Qy 552 DDKAMPVAGNAYKRGTWAGVAGSGNNTSKAYEAQOFADNANRAEFVDVDFANKSLTGKLI 611
Db 270 --EKAVPTTGTAKYLGNNVGYIA--GKDTGAGSSKSGFTDAKDQVADFDIDFEKKTWNGKLT 325
Qy 612 PNTSDCKSAFDITATIDGNGFSGKANTPDITGGLKIDSKNSGSRVIVKDAIVTGGFY 671
Db 326 TQGRQD--PVFNITGQIAGNGWTGTASTAKANAGGYNIDSSSSTNKSIVIKDAEVTGGFY 383
Qy 672 GPQANELGGSFYTKSNDAGNQDKDSSASVVFVGARKQOEVR 711
Db 384 GPANENMGSGSFTHNAD-----DSKSVVFGTKRQOEVR 415

RESULT 19

US-08-613-009A-20
; Sequence 20, Application US/08613009A
; Patent No. 6090576
; GENERAL INFORMATION:
; APPLICANT: Myers, Lisa E
; APPLICANT: Schryvers, Anthony B
; APPLICANT: Harkness, Robin E
; APPLICANT: Loomore, Sheena M.
; APPLICANT: Du, Run-Pan
; APPLICANT: Yang, Yan-Ping
; APPLICANT: Klein, Michel H
; TITLE OF INVENTION: Transferrin Receptor Genes of Moraxella
; NUMBER OF SEQUENCES: 31
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Sim & McBurney
; STREET: 6th Floor, 330 University Avenue
; CITY: Toronto
; STATE: Ontario
; COUNTRY: Canada
; ZIP: M5G 1R7

```
;
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patentin Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/613.009A
; FILING DATE: 08-MAR-1996
; CLASSIFICATION: 435
; ATTORNEY/AGENT INFORMATION:
; NAME: Stewart, Michael I
; REGISTRATION NUMBER: 24973
; REFERENCE/DOCKET NUMBER: 1038-542
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (416) 595-1155
; TELEFAX: (416) 595-1163
; INFORMATION FOR SEQ ID NO: 20:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 601 amino acids
; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear
;
US-08-613-009A-20

Query Match 25.6%; Score 950; DB 3; Length 601;
Best Local Similarity 36.0%; Pred. No. 2.8e-60;
Matches 242; Conservative 105; Mismatches 207; Indels 118; Gaps 26;

Qy 64 GGASGTGSAST-----QPKYQDVPTDKNKKDEVSGIQEPAMGYGVELKLRN--WIPOE 116
Db 24 GGSFDLDSVETQDMHSPKPYDEKSPQSDQSDSENSGAAYGFAVKLPRNAHFNPKY 83
Qy 117 QEEHAKINTNDVVKLEGLDKNPDNSIWONIKNSKEVQTVYNQEKQNIQIKKENKEL 176
Db 84 KE-----KKPLGSDMKLQKQEP-----NSFSERDELEKRGSGSE- 120
Qy 177 DKTALKALIEKVLDDYLTSLAKPIYEKNINDSHDKQNKARTDLKYVRSYVRSYGSNI 236
Db 121 -----LIESKWED-----GQSRVVGVTNFTYVRSYGVVYLN-KNNI 154
Qy 237 DIQKIAKTGPDGALFYKGTQAKQLPVSEVKYKGTWDFMTDAKKGQSFERRA-GDR 295
Db 155 DIKKNIVLFGPDGYLYYKGEPSKELPSEKITYKGTWDTVDAMEKQRFEGLSAAGGDK 214
Qy 296 YSAMSSEYPSLLTDDKNKPDNYNDEYGHSEFTVDRSKSLTGLFSN---LQDHHKGK 352
Db 215 SGALSALB-EGVLRNQASSGHTD-FGMTSEFEVDFSDKTIKGTLYRNNRITQNNSENK 272
Qy 353 VTKTRYDINARIHGNRPRGSATAIKDNESKAKHPFTSDADNRLEGFGYGNABEELAGK 412
Db 273 QIKTRYTIQATLHGNRFGKALAADK-GATNGSHPFISDSLS-LEGGFYGPKGEELAGK 330
Qy 413 FLTDNKLFGVFGAKQSE-----AKETAILDAYALGTFNKS GTTNPAFTANSKEL 465
Db 331 FLSNDKNVAAVFGAKQKQDKQDGENAAGPATETVIDAVRI-----TGEEF---KKEQI 379
Qy 466 DFNGINKLVLGSTVIDI--TGQND--FVKTIIDKEKPATTINQAGEPLTVNDKVRVQCC 521
Db 380 DSFGVKKLLLDVGVLSLLPSEGNAAFQHEIEQ-----NGVKAIVCC 422
Qy 522 SNLEHLFGSLISIGDSNVFVQGERATKGDKAMPVAGNAKYRGTWAGYVAGSGNTSK 581
Db 423 SNLDYMSFGKLSKENKDDMFQGVTPV---SDVAARTEANKYRGTWGYIA-NGTWS 478
Qy 582 AYEAQQFADNANRABFDVDFANKSLTGKLIINTSSDGKS-APDITATIDNGFSGKANTP 640
Db 479 GEASNQFTEGNNRABFDVDFKTSIGTL---TAKDRTPAFTITAMIKDNGFSGVAKTG 535
Qy 641 DIETGGLXIDKNSSEGRVIVKDAIVIGFGYPOANELGGSFYKSN-DAGNQDKSSAS 699
Db 536 E---NGFALDQNTGNSHYTHIEATVSGFGYKNAIEMGGSPFPNGAPEGQKQK---AS 589
Qy 700 VVFGARKQOEK 711
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Db 590 VVFGARKQQLVQ 601

RESULT 20
US-08-778-570B-26
; Sequence 26, Application US/08778570B
; Patent No. 6437096
; GENERAL INFORMATION:
; APPLICANT: Myers, Lisa E
; APPLICANT: Schryvers, Anthony B
; APPLICANT: Harkness, Robin E
; APPLICANT: Loosmore, Sheena M.
; APPLICANT: Du, Run-Pan
; APPLICANT: Yang, Yan-Ping
; APPLICANT: Klein, Michel H
; TITLE OF INVENTION: Transferrin Receptor Genes of Moraxella
; NUMBER OF SEQUENCES: 43
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Sim & McBurney
; STREET: 6th Floor, 330 University Avenue
; CITY: Toronto
; STATE: Ontario
; COUNTRY: Canada
; ZIP: M5G 1R7
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patentin Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/778,570B
; FILING DATE: 03-JAN-1997
; CLASSIFICATION: 536
; ATTORNEY/AGENT INFORMATION:
; NAME: Stewart, Michael I
; REGISTRATION NUMBER: 24973
; REFERENCE/DOCKET NUMBER: 1038-664
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (416) 595-1155
; TELEFAX: (416) 595-1163
; INFORMATION FOR SEQ ID NO: 26:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 601 amino acids
; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear
;
US-08-778-570B-26
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Query Match 25.6%; Score 950; DB 4; Length 601;
Best Local Similarity 36.0%; Pred. No. 2.8e-60;
Matches 242; Conservative 105; Mismatches 207; Indels 118; Gaps 26;

Qy 64 GGASGTGSAST-----QPKYQDVPTDKNKKDEVSGIQEPAMGYGVELKLRN--WIPOE 116
Db 24 GGSFDLDSVETQDMHSPKPYDEKSPQSDQSDSENSGAAYGFAVKLPRNAHFNPKY 83
Qy 117 QEEHAKINTNDVVKLEGLDKNPDNSIWONIKNSKEVQTVYNQEKQNIQIKKENKEL 176
Db 84 KE-----KKPLGSDMKLQKQEP-----NSFSERDELEKRGSGSE- 120
Qy 177 DKTALKALIEKVLDDYLTSLAKPIYEKNINDSHDKQNKARTDLKYVRSYVRSYGSNI 236
Db 121 -----LIESKWED-----GQSRVVGVTNFTYVRSYGVVYLN-KNNI 154
Qy 237 DIQKIAKTGPDGALFYKGTQAKQLPVSEVKYKGTWDFMTDAKKGQSFERRA-GDR 295
Db 155 DIKKNIVLFGPDGYLYYKGEPSKELPSEKITYKGTWDTVDAMEKQRFEGLSAAGGDK 214
Qy 296 YSAMSSEYPSLLTDDKNKPDNYNDEYGHSEFTVDRSKSLTGLFSN---LQDHHKGK 352
Db 215 SGALSALB-EGVLRNQASSGHTD-FGMTSEFEVDFSDKTIKGTLYRNNRITQNNSENK 272
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Qy 353 VTKRYDINARIHGNFRGATATKDNESKAKHPTSDADNRLEGFGYGNABELAGK 412
Db 273 QIKTRTYIQTALHGNRFGKALADK-GATNGSHPFISDS-LEGFGYGNABELAGK 330
Qy 413 FLTDNKLFGVFGAKQSE-----AKETRAILDALYALGTNFKSGTTNPAPTANSKKEL 465
Db 331 FLSDNKNVAAVFGAKQKDDGNAAGPATETVIDAYRI-----TGEEF---KKEQI 379
Qy 466 DNEGNINKVLGSGTVIDL--TQGN--FVKTIKKEPATTTNQAGEPLTVNDKVRVQVCC 521
Db 380 DSFGDVKKLLVDGVELSLPSEGNAKAAFOHEIQ-----NGVKATVCC 422
Qy 522 SNLEHLKFGSLSGDSNSVFLQERTATKGDKKAMPVAGNAKYRGTVAGVAGSGNTSK 581
Db 423 SNLDYMSFGKLSKENKDDMFQGVTPV---SDVAARTEANAKYRGTVAGVAGIA-NGTWS 478
Qy 582 AYEAAQFADNANRAEFVDYFANKSLTGKLIPTSSDGKS-AFDITATIDGNGFSGKANTP 640
Db 479 GEASNQFTEGGNRAEFVDFSTKISGTL---TAKDRTPAFTITAMIKDNGFSGVAKTG 535
Qy 641 DIETGGLKIDSKNSGSRVIVKDAIVIGFGYGPQANELGGSFTYKSN-DAGNQDKSSAS 699
Db 536 E---NGFALDPQNTGNSHYTHIEATVSGGFGYGNABELAGKQSEK---AS 589
Qy 700 VFGARKQOEVK 711
Db 590 VFGARKQQLVQ 601

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RESULT 21

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US-09-059-584-26
; Sequence 26, Application US/09059584
; Patent No. 6440701
; GENERAL INFORMATION:
; APPLICANT: Myers, Lisa E
; APPLICANT: Schryvers, Anthony B
; APPLICANT: Harkness, Robin E
; APPLICANT: Loomore, Sheena M.
; APPLICANT: Du, Run-Pan
; APPLICANT: Yang, Yan-Ping
; APPLICANT: Klein, Michel H
; TITLE OF INVENTION: Transferrin Receptor Genes of Moraxella
; NUMBER OF SEQUENCES: 60
; CORRESPONDENCE ADDRESS:
; ADDRESS: 6th Floor, 330 University Avenue
; CITY: Toronto
; STATE: Ontario
; COUNTRY: Canada
; ZIP: M5G 1R7
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patent in Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/09/059,584
; FILING DATE: 14-APR-1998
; CLASSIFICATION:
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/778,570
; FILING DATE: 03-JAN-1997
; CLASSIFICATION:
; ATTORNEY/AGENT INFORMATION:
; NAME: Stewart, Michael I
; REGISTRATION NUMBER: 24973
; REFERENCE/DOCKET NUMBER: 1038-794
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (416) 595-1155
; TELEFAX: (416) 595-1163
; INFORMATION FOR SEQ ID NO: 26:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 601 amino acids

```

```

; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear
US-09-059-584-26

Query Match 25.6%; Score 950; DB 4; Length 601;
Best Local Similarity 36.0%; Pred. No. 2.8e-60;
Matches 242; Conservative 105; Mismatches 207; Indels 118; Gaps 26;

Qy 64 GGASGTGSGTAST-----QPKYQDVPTDKNKKORVSGIQEPAMGYGVVELKURN--WIPQE 116
Db 24 GGSFGLDVSVEVTDHMSKPKYDEKSPQSDQSDVSENGAAYGFAVCLPRNAHFNPKY 83
Qy 117 OEEHAKINTDVKLEGLDKNHNPEDNSIMQNIKNKSKVEQTVYVQEKQNIQIKENKEL 176
Db 84 KE-----XHKPLGSDMKLQGEPE-----NSFSERDELEKKGSGSE- 120
Qy 177 DKTALKALIEKVLDDYLTSLAKPIYEKNINDSHDKONKARTDLYKRVSGYIYRSGYSNI 236
Db 121 -----LIESKWED-----CQSRVVGVTNFTYVRSYGVYLN-KNNI 154
Qy 237 DIQKIAKTGDFGALFYKGTQAKOLPVSEVYKGTWDFMTDAKKGQSFSSFFERRA-GDR 295
Db 155 DIKNNIVLFGPDGGLYKKEPSKELPESEKITYKGTWDTYDAMEKQRFEGLSAAGDK 214
Qy 296 YSAMSSEYPSLLTDDKNKPDNVDYCHSSEFTVDFSKSLTGLTGLPSN---LQHHKKG 352
Db 215 SGALSALIE-EGVLRNQAESSGHTD-FGMTSEFVDFSDTKTGTLRYNNRITQNNSENK 272
Qy 353 VTKRYDINARIHGNFRGATATKDNESKAKHPTSDADNRLEGFGYGNABELAGK 412
Db 273 QIKTRTYIQTALHGNRFGKALADK-GATNGSHPFISDS-LEGFGYGNABELAGK 330
Qy 413 FLTDNKLFGVFGAKQSE-----AKETRAILDALYALGTNFKSGTTNPAPTANSKKEL 465
Db 331 FLSDNKNVAAVFGAKQKDDGNAAGPATETVIDAYRI-----TGEEF---KKEQI 379
Qy 466 DNEGNINKVLGSGTVIDL--TQGN--FVKTIKKEPATTTNQAGEPLTVNDKVRVQVCC 521
Db 380 DSFGDVKKLLVDGVELSLPSEGNAKAAFOHEIQ-----NGVKATVCC 422
Qy 522 SNLEHLKFGSLSGDSNSVFLQERTATKGDKKAMPVAGNAKYRGTVAGVAGSGNTSK 581
Db 423 SNLDYMSFGKLSKENKDDMFQGVTPV---SDVAARTEANAKYRGTVAGVAGIA-NGTWS 478
Qy 582 AYEAAQFADNANRAEFVDYFANKSLTGKLIPTSSDGKS-AFDITATIDGNGFSGKANTP 640
Db 479 GEASNQFTEGGNRAEFVDFSTKISGTL---TAKDRTPAFTITAMIKDNGFSGVAKTG 535
Qy 641 DIETGGLKIDSKNSGSRVIVKDAIVIGFGYGPQANELGGSFTYKSN-DAGNQDKSSAS 699
Db 536 E---NGFALDPQNTGNSHYTHIEATVSGGFGYGNABELAGKQSEK---AS 589
Qy 700 VFGARKQOEVK 711
Db 590 VFGARKQQLVQ 601

RESULT 22
US-08-448-194-61
; Sequence 61, Application US/08448194
; Patent No. 6028049
; GENERAL INFORMATION:
; APPLICANT: JACOBS, Eric
; APPLICANT: LEGRAIN, Michele
; APPLICANT: MAZARIN, Veronique
; APPLICANT: BOUCHON-THIESEN, Bernadette
; APPLICANT: SCHRYVERS, Anthony B.
; APPLICANT: BLOCH, Marie-Aline
; TITLE OF INVENTION: DNA FRAGMENTS CODING FOR THE TRANSFERRIN
; RECEPTOR OF NEISSERIA MENINGITIDIS
; NUMBER OF SEQUENCES: 62
; CORRESPONDENCE ADDRESS:

```

```

; ADDRESSEE: Burns, Doane, Swecker & Mathis
; STREET: P.O. Box 1404
; CITY: Alexandria
; STATE: Virginia
; COUNTRY: United States
; ZIP: 22313-1404
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/448,194
; FILING DATE: 23-MAY-1995
; CLASSIFICATION: 435
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/361,469
; FILING DATE: 22-DEC-1994
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/078,053
; FILING DATE: 18-JUN-1993
; APPLICATION DATA:
; FILING DATE: 19-JUN-1992
; FILING DATE: 22-DEC-1994
; FILING DATE: 03-JUN-1997
; CLASSIFICATION: 435
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/445,472
; FILING DATE: 22-MAY-1995
; APPLICATION NUMBER: US 08/361,469
; FILING DATE: 22-DEC-1994
; CLASSIFICATION: 435
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/078,053
; FILING DATE: 18-JUN-1993
; CLASSIFICATION: 435
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: FR 92 07493
; FILING DATE: 19-JUN-1992
; ATTORNEY/AGENT INFORMATION:
; NAME: McGowan, Malcolm K.
; REGISTRATION NUMBER: 39,300
; REFERENCE/DOCKET NUMBER: 016100-004
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (703) 836-6620
; TELEFAX: (703) 836-2021
; INFORMATION FOR SEQ ID NO: 61:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 578 amino acids
; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; MOLECULE TYPE: DNA (genomic)
US-08-448-194-61

Query Match 25.4%; Score 942.5; DB 3; Length 578;
Best Local Similarity 36.1%; Pred. No. 9.3e-60;
Matches 242; Conservative 103; Mismatches 207; Indels 119; Gaps 26;

Qy 64 GGASGTCGAST-----QPKYQDVPTDKNKDEVGQIEPAMGVGVVELKLN--WIPOE 116
Db 4 GGSFDDLSVTVQDMHSPKPYDEKSPQESQDVSNSGAAYGFAVKLPRENAHFNPXY 63

Qy 117 QEEHAKINTNDVVKLEGLDKHNPFDNSTWQNIKNSKEVQTVYNOEKNIQIKENKEL 176
Db 64 KE-----KHKPLGSMDWKKLQRGEP-----NSFSRDELEKKGSGSE- 100

Qy 177 DKTALKALIEKVLDDYLTSLAKPIYEKINSHDKONKARTEDLKYSRSGYIYSGYSNI 236
Db 101 -----LIESKWED-----QQSRVGVYTNFTYVRSRGGVYILN-KNNI 134

Qy 237 DIQKIAKTGFDGALFYKGTOTAKOLPVSEVKYKGTWDMTDAAKGOSFSFERRAGDRY 296
Db 135 DIKNIVLFGPDGVLVYKGPSPKELPSEKITYKGTWYDVTDAWEKQRFEGSGAAGDKS 194

Qy 297 SAMSHSEYPSLLTDDKNKPNYNDYGHSSFTVDFSKSLTGGLFNS---LQDHHKGV 353
Db 195 GALSALAE-EGVLRNQAESSGHTD-FGWTSEFEVDFTKIKGLYRNRRITQNNSENKQ 252

Qy 354 TKTRYDINARIHGNRFGSATAKNONESAKHPFTSDADNRLEGGFYGNASELACKF 413
Db 253 IKTRYTIQATLHGNRFGKALADK-CATNGSHPFITSDSDS-LEGGFYGPKGBELACKF 310

Qy 414 LTDNKLGVGKAKQES-----AKETEAILDAYLGTENKSGTTPAFTANSKKELD 466
Db 311 LNDNKVAVFGAKQKDKDGENAAGPATETVIDAYRI-----TGEEF---KKEQID 359

Qy 467 NFGNINKLVLSGTVIDL--TQND--FVKTIKKEPATTTNQAGEPLTVNDKVRVQVCCS 522

; Db 360 SFGDVKKLLVDGVGVELSLPSEGNKAAAFQHEIQ-----NGVKATVCCS 402
; Qy 523 NLEHLKFGSLSIGDSNSVFLQGBERTATKGDKAMPVAGNAKYRGTWAGYVAGSGNTSKA 582
; Db 403 NLDYMSFGKLSKENKODMFLQGVRTPV---SDVAARTEANAKYRGTWGYIA--NGTWS 457
; Qy 583 YEAQQFADNANRAEFVDVPANKSLTGKLIPTNTSDGKS-AFDITATIDGNGFSGKANTPD 641
; Db 458 GEASN-QEGGNRAEFVDVFTKKISGTL---TAKDRTPAFTITAMIKDNGFSGVAKTGE 513
; Qy 642 IETGGLKIDSKNSSEGRVIVKDAIVIGGFYGPQANELGGSFYTKSN-DAGNQDKDSSASV 700
; Db 514 ---NGFALDPONTGNSHYTHIEATVSGGFYKKAIEGMGSGSFPGNAPEKGQEK---ASV 567
; Qy 701 VFGARKQOEVR 711
; Db 568 VFGAKRQQLVQ 578

RESULT 23
US-08-867-921-61
; Sequence 61, Application US/08867921
; Patent No. 6326350
; GENERAL INFORMATION:
; APPLICANT: JACOBS, Eric
; APPLICANT: LEGRAIN, Michele
; APPLICANT: MAZARIN, Veronique
; APPLICANT: BOUCHON-THIESEN, Bernadette
; APPLICANT: SCHRYVERS, Anthony B.
; APPLICANT: BLOCH, Marie-Aline
; TITLE OF INVENTION: DNA FRAGMENTS CODING FOR THE TRANSFERIN
; TITLE OF INVENTION: RECEPTOR OF NEISSERIA MENINGITIDIS
; NUMBER OF SEQUENCES: 62
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: BURNS, DOANE, SWECKER & MATHIS
; STREET: P.O. Box 1404
; CITY: Alexandria
; STATE: VA
; COUNTRY: USA
; ZIP: 22313-1404
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/867,921
; FILING DATE: 03-JUN-1997
; CLASSIFICATION: 435
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/445,472
; FILING DATE: 22-MAY-1995
; APPLICATION NUMBER: US 08/361,469
; FILING DATE: 22-DEC-1994
; CLASSIFICATION: 435
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/078,053
; FILING DATE: 18-JUN-1993
; CLASSIFICATION: 435
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: FR 92 07493
; FILING DATE: 19-JUN-1992
; ATTORNEY/AGENT INFORMATION:
; NAME: McGowan, Malcolm K.
; REGISTRATION NUMBER: 39,300
; REFERENCE/DOCKET NUMBER: 016100-004
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (703) 836-6620
; TELEFAX: (703) 836-2021
; INFORMATION FOR SEQ ID NO: 61:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 578 amino acids
```



```

; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; MOLECULE TYPE: DNA (genomic)
US-08-867-921-61

Query Match      25.4%; Score 942.5; DB 3; Length 578;
Best Local Similarity 36.1%; Pred. No. 9.3e-60;
Matches 242; Conservative 103; Mismatches 207; Indels 119; Gaps 26;

Qy 64 GGASSTGASST-----QKPKYQVPTDKNKDEVSIGIQEPAMGYGVVELKLRN--WIPOE 116
Db 4 GGGSFDLDSVETVQDMHSPKYEKSPESQDDVSENSGAAYGFAVKLPRNAHFNPY 63
Qy 117 QEEHAKINTNDVVKLEGLDKNPPDNSIWQNIKNSEKVEQTVYVNOEKQNIQIKENKEL 176
Db 64 KE-----KHKPLGSMWKKLQRP-----NSFSERDELEKRGSE- 100
Qy 177 DKTALKALIEKVLDDYLTSLAKPIYEKNINDSHDKONKARTDLYVRSYGYIYRSGYNI 236
Db 101 -----LIESKWED-----GQSRVVGVTNFTYVRSYGVYLN--KNNI 134
Qy 237 DIQKIAKTGFGDALFYKGTQAKOLPVSEVKYKGTWDMTDAKKGQSFSSERRAGDRY 296
Db 135 DIKNNIVLFGPDGYLYYKKEPSKELPKSEKITKGTWYVDVAMEKQRFEGSAAAGDKS 194
Qy 297 SAMSHSEYPSLLTDDKKNPDNDYNDYHSHSEFTVDFSKSLTGLFSN---LQDHHKGV 353
Db 195 GALSAL-EGVLNRQAEASSGHTD--FGMTSEFVDFSDKTIGTLRYNNRITQNNSENKQ 252
Qy 354 TKTRYDINARIGHNFRGSAATANKDNESKAKHPFTSDADNRLEGFGYVGNABELAGKF 413
Db 253 IKTRYTYIQTALHGNRFGKALAADK--GATNGSHPIFSDSDS--LEGGFYGPKGEELAGKF 310
Qy 414 LTDDNKLFGVFGAKQSE-----AKETEAILDAYALGTENKSGTINPAFTANSKELD 466
Db 311 LSNNDKVAAVFGAKQKDKGKGENAAGPATETVIDAYRI-----TGEEF---KKEQID 359
Qy 467 NFGNINKVLGSTVIDL--TQND--FVKTDKEKPAATTNQAGEPLTVNDKVRVQVCCS 522
Db 360 SFGDYKLLVGVVELSLPSEGNKAQFQHEIQ-----NGVKATVCCS 402
Qy 523 NLEHLKFGSLISGDSNSVLOGERTATKGDKDKAMPVAGNAKRYGTWAGYVAGSGNTSKA 582
Db 403 NLDVNSFGKLKSKENKDDMFLOQVRTPV---SDVAARTEANAKRYGTWGYIA--NGTSWS 457
Qy 583 YEAQFADNANRAEFDVDFANKSLTGKLIPINTSSDKS--AFDITATIDGNGFSGKANTPD 641
Db 458 GEASN--QEGGNRAEFDVDFSTKISGTL---TAKDRTSPATITAMIKDNGFSGVAKTGE 513
Qy 642 IETGGLKIDSXNSSEGRVIVKDAIVIGFYGPQANELGSGFTYKSN--DAGNQDKDSSASV 700
Db 514 --NGFALDPQNTGNSHVTHTEATVSGGYFGKNAIEMGGSFPGNAPEGKQEK---ASV 567
Qy 701 VFGARKQGEVK 711
Db 568 VFGARKQQLVQ 578

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RESULT 24

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US-08-448-194-2
; Sequence 2, Application US/08448194
; Patent No. 6028049
; GENERAL INFORMATION:
; APPLICANT: JACOBS, Eric
; APPLICANT: LEGRAIN, Michele
; APPLICANT: MAZARIN, Veronique
; APPLICANT: BOUCHON-THIESEN, Bernadette
; APPLICANT: SCHRYVERS, Anthony B.
; APPLICANT: BLOCH, Marie-Aline
; TITLE OF INVENTION: DNA FRAGMENTS CODING FOR THE TRANSFERRIN
; RECEPTOR OF NEISSERIA MENINGITIDIS
; NUMBER OF SEQUENCES: 62

```

```

; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Burns, Doane, Swecker & Mathis
; STREET: P.O. Box 1404
; CITY: Alexandria
; STATE: Virginia
; COUNTRY: United States
; ZIP: 22313-1404
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/448,194
; FILING DATE: 23-MAY-1995
; CLASSIFICATION: 435
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/361,469
; FILING DATE: 22-DEC-1994
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/078,053
; FILING DATE: 18-JUN-1993
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: FR 92 07493
; FILING DATE: 19-JUN-1992
; ATTORNEY/AGENT INFORMATION:
; NAME: McGowan, Malcolm M.
; REGISTRATION NUMBER: 39,300
; REFERENCE/DOCKET NUMBER: 016100-005
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (703) 836-6620
; TELEFAX: (703) 836-2021
; INFORMATION FOR SEQ ID NO: 2:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 599 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: protein
; US-08-448-194-2

Query Match      25.3%; Score 937; DB 3; Length 599;
Best Local Similarity 36.2%; Pred. No. 2.4e-59;
Matches 243; Conservative 103; Mismatches 206; Indels 120; Gaps 27;

Qy 64 GGASSTGASST-----QKPKYQVPTDKNKDVSIGIQEPAMGYGVVELKLRN--WIPOE 116
Db 24 GGGSFDLDSVETVQDMHSPKYEKSPESQDDVSENSGAAYGFAVKLPRNAHFNPY 83
Qy 117 QEEHAKINTNDVVKLEGLDKNPPDNSIWQNIKNSEKVEQTVYVNOEKQNIQIKENKEL 176
Db 84 KE-----KHKPLGSMWKKLQRP-----NSFSERDELEKRGSE- 120
Qy 177 DKTALKALIEKVLDDYLTSLAKPIYEKNINDSHDKONKARTDLYVRSYGYIYRSGYNI 236
Db 121 -----LIESKWED-----GQSRVVGVTNFTYVRSYGVYLN--KNNI 154
Qy 237 DIQKIAKTGFGDALFYKGTQAKOLPVSEVKYKGTWDMTDAKKGQSFSSERRA--GDR 295
Db 155 DIKNNIVLFGPDGYLYYKKEPSKELPKSEKITKGTWYVDVAMEKQRFEGLSAAAGDK 214
Qy 296 YSAMSHSEYPSLLTDDKKNPDNDYNDYHSHSEFTVDFSKSLTGLFSN---LQDHHKGV 352
Db 215 SGALSAL-EGVLNRQAEASSGHTD--FGMTSEFVDFSDKTIGTLRYNNRITQNNSENK 272
Qy 353 VTKTRYDINARIGHNFRGSAATANKDNESKAKHPFTSDADNRLEGFGYVGNABELAGK 412
Db 273 QIKTRYTYIQTALHGNRFGKALAADK--GATNGSHPIFSDSDS--LEGGFYGPKGEELAGK 330
Qy 413 LTDDNKLFGVFGAKQSE-----AKETEAILDAYALGTENKSGTINPAFTANSKEL 465
Db 331 FLSDNDKVAAVFGAKQKDKGKGENAAGPATETVIDAYRI-----TGEEF---KKEQI 379
Qy 466 DNFGNINKVLGSTVIDL--TQND--FVKTDKEKPAATTNQAGEPLTVNDKVRVQVCC 521

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Db 380 DSFGDVKKLLVGVLSLPSEGNKAAPQHEIEQ-----NGVKATVCC 422
Qy 522 SNLEHLKFGSLISIGDSNSVFLQGBERTATKGDKDKAMPVAGNAKYRGTWAGVAGSGNTSK 581
Db 423 SNLDYMSFGKLSKENKDDMFLOGVTPV---SDVAARTEANAKYRGTWYGVIA--NGTSW 477
Qy 582 AYEAAQFADNANRAEFDVDFANKSLTGKLIPTNTSSDGKS-AFDITATIDGNGFSGKANTP 640
Db 478 SGEASN-QEGGNRAEFDVDFSTKKISGTL---TAKDRTSPAFITAMIKONGFSGVAKTG 533
Qy 641 DIETGGLKIDSKNSSEGRVIVKDAIVIGFGYGPQANELGGSFTYKSN-DAGNQDKSSAS 699
Db 534 E---NGFALDPQNTGNSHYTHIEATVSGGFGYGNKNAIEMGGSFSPGNAPEGKQEK---AS 587
Qy 700 VVFGARKQOEYK 711
Db 588 VVFGAKRQQLVQ 599

RESULT 25
US-08-867-921-2
; Sequence 2, Application US/08867921
; Patent No. 6326350
; GENERAL INFORMATION:
; APPLICANT: JACOBS, Eric
; APPLICANT: LEGRAIN, Michele
; APPLICANT: MAZARIN, Veronique
; APPLICANT: BOUCHON-THIESEN, Bernadette
; APPLICANT: SCHRYVERS, Anthony B.
; APPLICANT: BLOCH, Marie-Aline
; TITLE OF INVENTION: DNA FRAGMENTS CODING FOR THE TRANSFERRIN
; TITLE OF INVENTION: RECEPTOR OF NEISSERIA MENINGITIDIS
; NUMBER OF SEQUENCES: 62
; CORRESPONDENCE ADDRESS: 62
; ADDRESSEE: BURNS, DOANE, SWECKER & MATHIS
; STREET: P.O. Box 1404
; CITY: Alexandria
; STATE: VA
; COUNTRY: USA
; ZIP: 22313-1404
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/867,921
; FILING DATE: 03-JUN-1997
; CLASSIFICATION: 435
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/445,472
; FILING DATE: 22-MAY-1995
; APPLICATION NUMBER: US 08/361,469
; FILING DATE: 22-DEC-1994
; CLASSIFICATION: 435
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/078,053
; FILING DATE: 18-JUN-1993
; CLASSIFICATION: 435
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: FR 92 07493
; FILING DATE: 19-JUN-1992
; ATTORNEY/AGENT INFORMATION:
; NAME: McGowan, Malcolm K.
; REGISTRATION NUMBER: 39,300
; REFERENCE/DOCKET NUMBER: 016100-004
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (703) 836-6620
; TELEFAX: (703) 836-2021
; INFORMATION FOR SEQ ID NO: 2:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 599 amino acids
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; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: protein
US-08-867-921-2

Query Match 25.3%; Score 937; DB 3; Length 599;
Best Local Similarity 36.2%; Pred. No. 2.4e-59;
Matches 243; Conservative 103; Mismatches 206; Indels 120; Gaps 27;

Qy 64 GGASSGTGSAST-----QKPKYQDVPTDKNKKDEVSGIQBPAMGYGVVELKRN--WIPOE 116
Db 24 GGGSFLLDSVETVQDMHKKPKYEDKESQPESQDQVSENSGAAYGFAVKLPRNAHFNPKY 83
Qy 117 QEBHAKINTNDVVVKGLEDLKHNFNDNSIWQNIKNSKEVQTVVYQEKQNIQNKENKEL 176
Db 84 KE-----KHKPLGSMWKKLQGBEP-----NSFSRDELEKKRGSSE- 120
Qy 177 DKTALKALIEKVLDDYLTSLAKPIYEKNINDSHDKQNKARTDLKYVRSGYIIRSGYSNI 236
Db 121 -----LIESKWED-----GQSRVVGTYTNTYVRSYGVYLN--KNNI 154
Qy 237 DIOKIIAKTGDGALFYKGTQTAKOLPVSSEVKYKGTWDFMTDAKKGQSFSSFERRA--GDR 295
Db 155 DIKNNIVLPGDGLVLYKKEPSKELPSEKITVYKGTWDYVTDAMEKORFGLGSAAGDK 214
Qy 296 YSAMSSEHYPSLLTDDKNKPDNYNDEYGHSEFTVDFSKSLTGGLFSN---LQDHHKKG 352
Db 215 SGALSALAE-EGVLRNQAEEASSGHTD-FGMTSEFEVDPSDKTIKGTLYRNNRITQNNSENK 272
Qy 353 VTKTRYDINARIHGNRFRGSATAINKDNESKAKHPPTSADNRLEGGFYGPNAELAGK 412
Db 273 QIKTRYTIQATLHGNRFKGAALAAADK-GATNGSHPPISDSDS-LEGGFYGPKGEELAGK 330
Qy 413 FLATDDNKLFCGVGAKQESSE-----AKETEAILDAVALGTENKSGTNTNPAFTANSKEL 465
Db 331 FLSDNDKVAAVFGAKQDKKQGENAGPATETVIDATRI-----TGEEF---KKEQI 379
Qy 466 DNFENINKLVLGSTVIDL--TGQND--FVKTIIDKEPATTTNQAGEPLTVNDKVRVQVCC 521
Db 380 DSFGDVKKLLVGVLSLPSEGNKAAPQHEIEQ-----NGVKATVCC 422
Qy 522 SNLEHLKFGSLISIGDSNSVFLQGBERTATKGDKDKAMPVAGNAKYRGTWAGVAGSGNTSK 581
Db 423 SNLDYMSFGKLSKENKDDMFLOGVTPV---SDVAARTEANAKYRGTWYGVIA--NGTSW 477
Qy 582 AYEAAQFADNANRAEFDVDFANKSLTGKLIPTNTSSDGKS-AFDITATIDGNGFSGKANTP 640
Db 478 SGEASN-QEGGNRAEFDVDFSTKKISGTL---TAKDRTSPAFITAMIKONGFSGVAKTG 533
Qy 641 DIETGGLKIDSKNSSEGRVIVKDAIVIGFGYGPQANELGGSFTYKSN-DAGNQDKSSAS 699
Db 534 E---NGFALDPQNTGNSHYTHIEATVSGGFGYGNKNAIEMGGSFSPGNAPEGKQEK---AS 587
Qy 700 VVFGARKQOEYK 711
Db 588 VVFGAKRQQLVQ 599

RESULT 26
US-08-487-890A-97
; Sequence 97, Application US/08487890A
; Patent No. 5708149
; GENERAL INFORMATION:
; APPLICANT: Loosmore, Sheena
; APPLICANT: Harkness, Robin
; APPLICANT: Schryvers, Anthony
; APPLICANT: Chong, Pele
; APPLICANT: Gray-Owen, Scott
; APPLICANT: Yang, Van-ping
; APPLICANT: Murdin, Andrew
; APPLICANT: Klein, Michel
; TITLE OF INVENTION: Transferrin Receptor Genes
; NUMBER OF SEQUENCES: 147
```



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Query Match      25.1%; Score 931.5; DB 2; Length 598;
Best Local Similarity 36.2%; Pred. No. 6.1e-59;
Matches 243; Conservative 102; Mismatches 207; Indels 119; Gaps 27;

Qy 64 GGASGTSAST-----QKPKYQDVPTDKNKKDEVSGIQBPAMGYGVYELKLN--WIPQE 116
Db 24 GGGFDLDSVETQDMHSPKPYDEKSPQSDVSENSGAAYGFAVKLP RNAHPKY 83

Qy 117 QEEHAKINTDVKLEGLDHPNPDNSIWQIKNSKEVQTVYNOEKQNIQIKKENKEL 176
Db 84 KE-----KHKPLGSDMKLQGE-----NSFSEDELEKRGSE- 120

Qy 177 DKTALKALIEKVLDDYLTSLAKPIYKNIINSHDKQNKARTDLKYVRSGYVRSYNI 236
Db 121 -----LIESKVED-----GQSRVGYTFTYVRSYVYLN-KNNI 154

Qy 237 DIQKIAKTGDFGALFYGTQATKQLPVSEVKYKGTWDFMTDAKKGQSFSEFERRA-GDR 295
Db 155 DIKNNIVLFGPDGYLYYKKEPKSEKITKGTWYVDVTDAMEKQRFEGLSAAGDK 214

Qy 296 YSAMSHEYPSELLTDDKNKPDNYNDEYHSHSEFTVDFSKSLTGLFSN---LQDHHKGK 352
Db 215 SGALSALIEGVLRNQAEASSGHTD-FGMTSEFEVDFSDTKITKGLYRNRIITQNNSENK 272

Qy 353 VTCTRYDINARIHGNRFRGSATANKDNESKAKHPFTSDADNRLEGFGYGPNAEELAGK 412
Db 273 QIKTRYTIQATLHGNRFGKALAADK-GATNGSHPPFISDS-LEGFGYGPKEELAGK 330

Qy 413 FLTDNKLFGVFGAKQ-----ESEAETEAILDAYALGTFTNKSGLTNPAPTANSKEL 466
Db 331 FLSDNKNVAAVFGAKQKDKDGENAAGPATVIDAYRI-----TGEF----KQEQID 379

Qy 467 NFGNINKVLGSTVIDL--TGND--FVKTIIDKEKPATTTNQAAGEPLTVNDKVRVQVCCS 522
Db 380 SFGDVKKLLVDGVVELSLPSEGNKAAFOHEIQ-----NGVATVCCS 422

Qy 523 NLEHLKFGSLSIGDSNSVFLQERTATKGDKDKAMPVAGNAKYRGTWAGYVAGSGNTSKA 582
Db 423 NLDYMSFGKLSKENKDMFLQGVTPV---SDVAARTEANAKYRGTWGYIA--NGTWS 477

Qy 583 YEAQFADNANRAEFVDVPANKSLTGKLIPTSSDGKS-APDITATIDGNGFSKANTPD 641
Db 478 GEASN-QEGGNRAEFVDVFTKKSIGTL---TAKDRTPAPTITAMIKDNGFSVAKTGE 533

Qy 642 IETGGLKIDSKNSSEGRVIVKDAIVIGFGYGPQANELGSGFTYKSN-DAGNQDKDSASV 700
Db 534 ---NGFALDPQNTGNSHYTHIEATVSGGYGKNAIEMGGSFSPGNAPEGKQEK---ASV 587

Qy 701 VFGARKQOEK 711
Db 588 VFGAKRQLVQ 598

RESULT 28
US-08-337-483-97
; Sequence 97, Application US/08337483
; Patent No. 5922562
; GENERAL INFORMATION:
; APPLICANT: Loomore, Sheena
; APPLICANT: Harkness, Robin
; APPLICANT: Schryvers, Anthony
; APPLICANT: Chong, Pele
; APPLICANT: Gray-Owen, Scott
; APPLICANT: Yang, Yan-ping
; APPLICANT: Mordin, Andrew
; APPLICANT: Klein, Michel
; TITLE OF INVENTION: Transferrin Receptor Genes
; NUMBER OF SEQUENCES: 147
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Sim & McBurney
; STREET: Suite 701, 330 University Avenue
; CITY: Toronto
; STATE: Ontario
```

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COUNTRY: Canada
ZIP: M5G 1R7
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/337,483
FILING DATE: 08-NOV-1994
CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: Stewart, Michael I
REGISTRATION NUMBER: 24,973
REFERENCE/DOCKET NUMBER: 1038-410 MIS:jb
TELECOMMUNICATION INFORMATION:
TELEPHONE: (416) 595-1155
TELEFAX: (416) 595-1163
INFORMATION FOR SEQ ID NO: 97:
SEQUENCE CHARACTERISTICS:
LENGTH: 598 amino acids
TYPE: amino acid
STRANDEDNESS: single
TOPOLOGY: linear
US-08-337-483-97

Query Match      25.1%; Score 931.5; DB 2; Length 598;
Best Local Similarity 36.2%; Pred. No. 6.1e-59;
Matches 243; Conservative 102; Mismatches 207; Indels 119; Gaps 27;

Qy 64 GGASGTSAST-----QKPKYQDVPTDKNKKDEVSGIQBPAMGYGVYELKLN--WIPQE 116
Db 24 GGGFDLDSVETQDMHSPKPYDEKSPQSDVSENSGAAYGFAVKLP RNAHPKY 83

Qy 117 QEEHAKINTDVKLEGLDHPNPDNSIWQIKNSKEVQTVYNOEKQNIQIKKENKEL 176
Db 84 KE-----KHKPLGSDMKLQGE-----NSFSEDELEKRGSE- 120

Qy 177 DKTALKALIEKVLDDYLTSLAKPIYKNIINSHDKQNKARTDLKYVRSGYVRSYNI 236
Db 121 -----LIESKVED-----GQSRVGYTFTYVRSYVYLN-KNNI 154

Qy 237 DIQKIAKTGDFGALFYGTQATKQLPVSEVKYKGTWDFMTDAKKGQSFSEFERRA-GDR 295
Db 155 DIKNNIVLFGPDGYLYYKKEPKSEKITKGTWYVDVTDAMEKQRFEGLSAAGDK 214

Qy 296 YSAMSHEYPSELLTDDKNKPDNYNDEYHSHSEFTVDFSKSLTGLFSN---LQDHHKGK 352
Db 215 SGALSALIEGVLRNQAEASSGHTD-FGMTSEFEVDFSDTKITKGLYRNRIITQNNSENK 272

Qy 353 VTCTRYDINARIHGNRFRGSATANKDNESKAKHPFTSDADNRLEGFGYGPNAEELAGK 412
Db 273 QIKTRYTIQATLHGNRFGKALAADK-GATNGSHPPFISDS-LEGFGYGPKEELAGK 330

Qy 413 FLTDNKLFGVFGAKQ-----ESEAETEAILDAYALGTFTNKSGLTNPAPTANSKEL 466
Db 331 FLSDNKNVAAVFGAKQKDKDGENAAGPATVIDAYRI-----TGEF----KQEQID 379

Qy 467 NFGNINKVLGSTVIDL--TGND--FVKTIIDKEKPATTTNQAAGEPLTVNDKVRVQVCCS 522
Db 380 SFGDVKKLLVDGVVELSLPSEGNKAAFOHEIQ-----NGVATVCCS 422

Qy 523 NLEHLKFGSLSIGDSNSVFLQERTATKGDKDKAMPVAGNAKYRGTWAGYVAGSGNTSKA 582
Db 423 NLDYMSFGKLSKENKDMFLQGVTPV---SDVAARTEANAKYRGTWGYIA--NGTWS 477

Qy 583 YEAQFADNANRAEFVDVPANKSLTGKLIPTSSDGKS-APDITATIDGNGFSKANTPD 641
Db 478 GEASN-QEGGNRAEFVDVFTKKSIGTL---TAKDRTPAPTITAMIKDNGFSVAKTGE 533

Qy 642 IETGGLKIDSKNSSEGRVIVKDAIVIGFGYGPQANELGSGFTYKSN-DAGNQDKDSASV 700
Db 534 ---NGFALDPQNTGNSHYTHIEATVSGGYGKNAIEMGGSFSPGNAPEGKQEK---ASV 587
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Qy 701 VFGARKQOEYK 711
Db 588 VFGAKRQOLVQ 598

RESULT 29
US-08-478-373-97
; Sequence 97, Application US/08478373
; Patent No. 592841
; GENERAL INFORMATION:
; APPLICANT: Loosmore, Sheena
; APPLICANT: Harkness, Robin
; APPLICANT: Schryvers, Anthony
; APPLICANT: Chong, Pele
; APPLICANT: Gray-Owen, Scott
; APPLICANT: Yang, Yan-ping
; APPLICANT: Murdin, Andrew
; APPLICANT: Klein, Michel
; TITLE OF INVENTION: Transferrin Receptor Genes
; NUMBER OF SEQUENCES: 147
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Sim & McBurney
; STREET: Suite 701, 330 University Avenue
; CITY: Toronto
; STATE: Ontario
; COUNTRY: Canada
; ZIP: M5G 1R7
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/478,373
; FILING DATE: 07-JUN-1995
; CLASSIFICATION: 435
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/337,483
; FILING DATE: 08-NOV-1994
; CLASSIFICATION: 435
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/175,116
; FILING DATE: 29-DEC-1993
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/148,968
; FILING DATE: 08-NOV-1993
; ATTORNEY/AGENT INFORMATION:
; NAME: Stewart, Michael I
; REGISTRATION NUMBER: 24,973
; REFERENCE/DOCKET NUMBER: 1038-463 MIS:vg
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (416) 595-1155
; TELEFAX: (416) 595-1163
; INFORMATION FOR SEQ ID NO: 97:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 598 amino acids
; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear
US-08-478-373-97

Query Match 25.1%; Score 931.5; DB 2; Length 598;
Best Local Similarity 36.2%; Pred. No. 6.1e-59;
Matches 243; Conservative 102; Mismatches 207; Indels 119; Gaps 27;

Qy 64 CGASGTCGASCT-----QKPKYQDVPTDKNKKDEVSIGQEBAMGYGVLEKLKN--WIPOE 116
Db 24 CGGSPDLDSVETQDMHSPKPYDEKSPBSQQDVSNSGAAYGFAVKLPERNAHFNPKY 83
Qy 117 QEEHAKINTNDVKLEGLDKINPFDSIWQNIKNSKEVQTVYNQEKQNIENQIKENKEL 176
Db 84 KE-----KKHPLGMDWKQLQGE-----NSFSRDELEKKGSGSE- 120

177 DKTALKALIEKVLDDYLTSLAKPIYEKNINDSHDKQNKARTDLKYVRSYIYRSGYSNI 236
121 -----LIESKWED-----GOSRVWGYNTFTYRSGYVYILN--KNNI 154
237 DIQKIAKTGFDGALFYKGTQTAKQLPVSEVKYKGTWDFMTDAKKGQSFSSFFERRA--GDR 295
155 DIKNIVLFGPDGYLYYKKEPSKELPSEKITKGTWYVTDAMEKQRFEGGLGSAAGDK 214
296 YSAMSHEYPSSLTDDKRNKPDNYNDEYHSHSEFTVDFSKSLTGLFSN-----LDHGHKGK 352
215 SGALSALF--EGLRNQAEASSGHTD--FGMTSEFEVDFSDKTIKGTLYRNNRITQNNSENK 272
353 VTKTRYDINARIHGNERFRGSATANKDNESKAGHPTSDADNPLEGGFYCPNAEELAGK 412
273 QIKTRYTIQATLHGNRFGKALAAK--GATNGSHPPFISDS--LEGGFYGPKEELAGK 330
413 FLTDNKLFGVFGAKQ-----ESEAKEBTEAILDAYALGTFFNKSGTTPNPAFTANSKKELD 466
331 FLSDNKNVAAVFGAKQKDKKXGNAAGPATEVIDAYRI-----TGEFF--KKEQID 379
467 NFGNINKVLGSTVIDL--TQND--FVKTIKKEKPATTNNQAGEPLTVNDKVRVQVCCS 522
380 SFGDVKKLLVDGVVELSLPSEGKAAAFQHEIEQ-----NGVKATVCCS 422
523 NLEHLKFSLSIGDSNSVFLOGERTATKGDKDKAMPVAGNNAKYRGTWAGYVAGSGNTSKA 582
423 NLDYMSFGKLSKENKDDMFLOGVPTV--SDVAARTEANAKYRGTWYGYIA--NGTSWS 477
583 YEAQFADNANRAEFVDVDFANKSLTGKLIPTNSDGS--AFDITATIDGNGFSGKANTPD 641
478 GEASN--QEGGNRAEFVDVFTKKISGTL--TAKDRTSPATITAMIKDNGFSGVAKTGE 533
642 IETGGLKIDSKNSSEGRVIVKDAIVIGFGYGPQANELGGSTYKSN--DAGNQDKDSSASV 700
534 ---NGFALDPQNTGNSHYTHIEATVSGGYGKNAIEMGGSFSPGNAPEGKQEK---ASV 587
701 VFGARKQOEYK 711
588 VFGAKRQOLVQ 598

RESULT 30
US-08-474-671-97
; Sequence 97, Application US/08474671
; Patent No. 6008326
; GENERAL INFORMATION:
; APPLICANT: Loosmore, Sheena
; APPLICANT: Harkness, Robin
; APPLICANT: Schryvers, Anthony
; APPLICANT: Chong, Pele
; APPLICANT: Gray-Owen, Scott
; APPLICANT: Yang, Yan-ping
; APPLICANT: Murdin, Andrew
; APPLICANT: Klein, Michel
; TITLE OF INVENTION: Transferrin Receptor Genes
; NUMBER OF SEQUENCES: 147
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Sim & McBurney
; STREET: Suite 701, 330 University Avenue
; CITY: Toronto
; STATE: Ontario
; COUNTRY: Canada
; ZIP: M5G 1R7
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/474,671
; FILING DATE: 07-JUN-1995
; CLASSIFICATION: 530

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; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/337,483
; FILING DATE: 08-NOV-1994
; CLASSIFICATION: 530
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/175,116
; FILING DATE: 29-DEC-1993
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/148,968
; FILING DATE: 08-NOV-1993
; ATTORNEY/AGENT INFORMATION:
; NAME: Stewart, Michael I
; REGISTRATION NUMBER: 24,973
; REFERENCE/DOCKET NUMBER: 1038-465 MIS:vg
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (416) 595-1155
; TELEFAX: (416) 595-1163
; INFORMATION FOR SEQ ID NO: 97:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 598 amino acids
; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear
;
US-08-474-671-97
Query Match 25.1%; Score 931.5; DB 3; Length 598;
Best Local Similarity 36.2%; Pred. No. 6.1e-59;
Matches 243; Conservative 102; Mismatches 207; Indels 119; Gaps 27;

Qy 64 GGASGTGSAST-----QPKYQDVPTDKKKDEVSIGIQBPAMGYGVELKLRN--WIPOE 116
Db |||||:|||||:
24 GGSFDLDSVETQDMHSEKPYEDEKSPESQDVSNSGAAYGFAVKLPRNAHFNPKY 83
Qy 117 QEEHAKINTDVKLEGLDKHNPDSINQNIKNSKEVQTVYNOEKQNIENQIKENKEL 176
Db :||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:
84 KE-----KHKPLGSDMKLQRP-----NSFSRDELEKRGSGSE- 120
Qy 177 DKTALKALIEKVLDDYLTSKAPIYEKNINDSHDKONKARTDLYKVRSGYIYRSGYSNI 236
Db |||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:
121 -----LIESKWED-----QSRVVGVTNTYRSGYVYLN--KNNI 154
Qy 237 DIQKIARTGPGALFYKGTQAKQLPVSEYKYKGTWDFMTDAKKQSGSFERRA--GDR 295
Db |||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:
155 DIKNNIVLFGPDGVLVYKGPSEKLPSEKITKGTGWDYVTDAMEKQRFGLGSAAGGDK 214
Qy 296 YSAMSSEYPSLLITDDKKNPNYDEYCHSSEFTVDSKSLTGLPSN----LQDHKKG 352
Db |||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:
215 SGALSALD--EGLVRNQAEASGHTD--FGMTSEFEVDFSDKTIGTLRYNNRITQNNSENK 272
Qy 353 VTKTKRYDINARIHGNRFRGSATAIKNONESKAKHPFTSDADNRLEGFGYGPNAEELAGK 412
Db |||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:
273 QIKTRTYIQATLHGNRFKGLAADK--GATNGSHPTSDSDS--LEGFGYGPKEELAGK 330
Qy 413 FLTDNKLFGVFGAKQ-----ESEAKETEAILDAYALGTFNKSGTTNPAFTANSKKELD 466
Db |||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:
331 FLSNDNKVAAVFGAKQKDKDGENAAGAPATEVIDAYRI-----TGEFP--KKEQID 379
Qy 467 NFGINKLVLSGTVIDL--TGND--FVKTTDKKPAATTNQAGEPLTVNDKVRVQVCCS 522
Db |||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:
380 SFGDVKKLLVDGVELSLPSEGNKAAFOHEIEQ-----NGVRKATVCCS 422
Qy 523 NLEHLKGLSIGDSNSVFLQERTATKGDKDKAMPVAGNAKYRTWAGYVAGSGNTSKA 582
Db |||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:
423 NLDYMSFGKLSKENKDDMFLOGVTPV---SDVAARTEANAKYGTWGYIA--NGTWS 477
Qy 583 YEAQOQADNANRAFDVDPAFKSITGKLIPTNTSSDGKS--AFDITATIDNGFSGKANTPD 641
Db |||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:
478 GEAGN--QEGGNRAEFDVDFSTKISGTL---TAKDRTSPAFTITAMIKDNGFSGVAKTGE 533
Qy 642 IETGGLKIDSKNSSEGRVIVKDAVIGGFYGPQANELGGSTFYKSN--DAGNQDKDSSASV 700
Db |||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:
534 ---NGFALDPQNTGNSHYTHTEATVSGGFYKNAIEMGGSFPGNAPGKQEK---ASV 587
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Qy 701 VFGARKQOEYK 711
Db |||||:|||||:
588 VFGAKRQQLVQ 598

RESULT 31
US-08-483-577A-97
; Sequence 97, Application US/08483577A
; Patent No. 6015688
; GENERAL INFORMATION:
; APPLICANT: Loosmore, Sheena
; APPLICANT: Harkness, Robin
; APPLICANT: Schryvers, Anthony
; APPLICANT: Chong, Pele
; APPLICANT: Gray-Owen, Scott
; APPLICANT: Yang, Yan-Ping
; APPLICANT: Mordin, Andrew
; APPLICANT: Klein, Michel
; TITLE OF INVENTION: Transferrin Receptor Genes
; NUMBER OF SEQUENCES: 160
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Sim & McBurney
; STREET: Suite 701, 330 Unviersity Avenue
; CITY: Toronto
; STATE: Ontario
; COUNTRY: Canada
; ZIP: M5G 1R7
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patent in Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/483,577A
; FILING DATE: 07-JUN-1995
; CLASSIFICATION: 435
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/337,483
; FILING DATE: 08-NOV-1994
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/175,116
; FILING DATE: 29-DEC-1993
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/148,968
; FILING DATE: 08-NOV-1993
; ATTORNEY/AGENT INFORMATION:
; NAME: Stewart, Michael I
; REGISTRATION NUMBER: 24,973
; REFERENCE/DOCKET NUMBER: 1038-511
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (416) 595-1155
; TELEFAX: (416) 595-1163
; INFORMATION FOR SEQ ID NO: 97:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 598 amino acids
; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear
;
US-08-483-577A-97
Query Match 25.1%; Score 931.5; DB 3; Length 598;
Best Local Similarity 36.2%; Pred. No. 6.1e-59;
Matches 243; Conservative 102; Mismatches 207; Indels 119; Gaps 27;

Qy 64 GGASGTGSAST-----QPKYQDVPTDKKKDEVSIGIQBPAMGYGVELKLRN--WIPOE 116
Db |||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:
24 GGSFDLDSVETQDMHSEKPYEDEKSPESQDVSNSGAAYGFAVKLPRNAHFNPKY 83
Qy 117 QEEHAKINTDVKLEGLDKHNPDSINQNIKNSKEVQTVYNOEKQNIENQIKENKEL 176
Db :||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:
84 KE-----KHKPLGSDMKLQRP-----NSFSRDELEKRGSGSE- 120
Qy 177 DKTALKALIEKVLDDYLTSKAPIYEKNINDSHDKONKARTDLYKVRSGYIYRSGYSNI 236
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121 121 -----LIESKWED-----GQSRVVGVTNFTYVRSYVYLN-KNNI 154
QY 237 DIQKIAKTGPDGALFYKGTOTAKOLPVSEVKYKGTWDMTDAKKGQSFSSFFERRA-GDR 295
Db 155 DIKNIVLFGPDGYLYYKGPSEKLPSEKITYKGTWDTVDAMEKQRFEGIGLSAAGGDK 214
QY 296 YSAMSSEYPSLLTDDKNKPNYNDYGHSEFTVDFSKSLTGLPSN---LQDHHKKG 352
Db 215 SGALSALB-EGVLNQAEASSGHTD-FGWTSEFEVDFSDKTIKGLYRNNRITQNNSENK 272
QY 353 VTKTRYDINARIHGNRFRGSATAIKDNESKAKHPFTSDADNRLEGGFYGNABELAGK 412
Db 273 QIKTRYTIQATLHGNRFKGLAADK-GATNGSHPFISDS-LEGGFYGPKGBELAGK 330
QY 413 FLTDNKLFGVFGAKQ-----ESAKETEALDVALGTENKSGTTNPAFTANSKBLD 466
Db 331 FLSDNKNVAAVFGAKQKXKXGNAAGPATEVIDAYRI-----TGEFP-----KKEQID 379
QY 467 NFGNINKVLGSTVIDL--TGND--FVKTIKKEPATTTNQAGEPLTVNDKRVQVCCS 522
Db 380 SFGDVKKLLVDGVLSLLPSEGNAKAFQHEIQ-----NGVKATVCCS 422
QY 523 NLEHLKFGSLISGDSNSVFLQERTATKGDOKKAMPVAGNAKYRGTWAGYVAGSGNTSKA 582
Db 423 NLDYMSFGKLSKENKDDMFLOGVRTPV---SDVAARTEANAKYRGTWGYIA--NGTSWS 477
QY 583 YEAQOFADNANRAEFDVDFANKSLTGKLIPTNTSSDGKS-AFDITATIDNGFSGKANTPD 641
Db 478 GEASN-QEGGNRAEFDVDFSTKISGTL--TAKDRTSPAFTITAMIKDNGFSGVAKTGE 533
QY 642 IETGGLKIDSNSSEGRVIVKDAIVIGFGYPOANELGGSFTYKSN-DAGNQDKDSSASV 700
Db 534 ---NGFALDPQNTGNSHYTHIEATVSGGFYGNKAIEMGGSFSPGNAPEGKQEK---ASV 587
QY 701 VFGARKQOEK 711
Db 588 VFGARKQOLVQ 598

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RESULT 32

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US-08-897-438-97
; Sequence 97, Application US/08897438
; Patent No. 6262016
;
GENERAL INFORMATION:
; APPLICANT: Loosmore, Sheena
; APPLICANT: Harkness, Robin
; APPLICANT: Schryvers, Anthony
; APPLICANT: Chong, Pele
; APPLICANT: Gray-Owen, Scott
; APPLICANT: Yang, Yan-Ping
; APPLICANT: Murdin, Andrew
; APPLICANT: Klein, Michel
;
TITLE OF INVENTION: Transferrin Receptor Genes
;
NUMBER OF SEQUENCES: 160
;
CORRESPONDENCE ADDRESS:
; ADDRESS: Sim & McBurney
; STREET: 6th Floor, 330 University Avenue
; CITY: Toronto
; STATE: Ontario
; COUNTRY: Canada
;
ZIP: MSG 1R7
;
COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patentin Release #1.0, Version #1.25
;
CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/897,438
; FILING DATE:
; CLASSIFICATION: 435
;
PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/483,577

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; FILING DATE: 07-JUN-1995
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/337,483
; FILING DATE: 08-NOV-1994
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/175,116
; FILING DATE: 29-DEC-1993
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/148,968
; FILING DATE: 08-NOV-1993
; ATTORNEY/AGENT INFORMATION:
; NAME: Stewart, Michael I
; REGISTRATION NUMBER: 24,973
; REFERENCE/DOCKET NUMBER: 1038-720
; TELEPHONE: (416) 595-1155
; TELEFAX: (416) 595-1163
; INFORMATION FOR SEQ ID NO: 97:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 598 amino acids
; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear
;
US-08-897-438-97

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Query Match 25.1%; Score 931.5; DB 3; Length 598;

Best Local Similarity 36.2%; Pred. No. 6.1e-59;

Matches 243; Conservative 102; Mismatches 207; Indels 119; Gaps 27;

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QY 64 GGASGGTGAAGT-----QKPKYQDVPTDKNKKKDEVSQGPQEPAMGVGVVELKLN--WIPQE 116
Db 24 GGGFDDLDVETVQDMHSKPKYEDEKSPQESQQDVSENAGYGFVAVKLPNRNAHFNPKY 83
QY 117 QEEHAKINTNDVVKLEGDLKHNPFNDNSIQWIKNSKEVQTVYNOEKQNIQIKENKEL 176
Db 84 KE-----KHKPLGSDMKLQGEF-----NSFSRDELEKKGSS- 120
QY 177 DKTALKALIEKVDLYTSLAKPIYKKNINDSHDKQNKARTDLKYVRSYVYRSGYVNI 236
Db 121 -----LIESKWED-----GQSRVVGVTNFTYVRSYVYLN-KNNI 154
QY 237 DIQKIAKTGPDGALFYKGTOTAKOLPVSEVKYKGTWDMTDAKKGQSFSSFFERRA-GDR 295
Db 155 DIKNIVLFGPDGYLYYKGPSEKLPSEKITYKGTWDTVDAMEKQRFEGIGLSAAGGDK 214
QY 296 YSAMSSEYPSLLTDDKNKPNYNDYGHSEFTVDFSKSLTGLPSN---LQDHHKKG 352
Db 215 SGALSALB-EGVLNQAEASSGHTD-FGWTSEFEVDFSDKTIKGLYRNNRITQNNSENK 272
QY 353 VTKTRYDINARIHGNRFRGSATAIKDNESKAKHPFTSDADNRLEGGFYGNABELAGK 412
Db 273 QIKTRYTIQATLHGNRFKGLAADK-GATNGSHPFISDS-LEGGFYGPKGBELAGK 330
QY 413 FLTDNKLFGVFGAKQ-----ESAKETEALDVALGTENKSGTTNPAFTANSKBLD 466
Db 331 FLSDNKNVAAVFGAKQKXKXGNAAGPATEVIDAYRI-----TGEFP-----KKEQID 379
QY 467 NFGNINKVLGSTVIDL--TGND--FVKTIKKEPATTTNQAGEPLTVNDKRVQVCCS 522
Db 380 SFGDVKKLLVDGVLSLLPSEGNAKAFQHEIQ-----NGVKATVCCS 422
QY 523 NLEHLKFGSLISGDSNSVFLQERTATKGDOKKAMPVAGNAKYRGTWAGYVAGSGNTSKA 582
Db 423 NLDYMSFGKLSKENKDDMFLOGVRTPV---SDVAARTEANAKYRGTWGYIA--NGTSWS 477
QY 583 YEAQOFADNANRAEFDVDFANKSLTGKLIPTNTSSDGKS-AFDITATIDNGFSGKANTPD 641
Db 478 GEASN-QEGGNRAEFDVDFSTKISGTL--TAKDRTSPAFTITAMIKDNGFSGVAKTGE 533
QY 642 IETGGLKIDSNSSEGRVIVKDAIVIGFGYPOANELGGSFTYKSN-DAGNQDKDSSASV 700
Db 534 ---NGFALDPQNTGNSHYTHIEATVSGGFYGNKAIEMGGSFSPGNAPEGKQEK---ASV 587

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Qy 701 VFGARKQOEYK 711
Db 588 VFGAKRQQLVQ 598

RESULT 33
US-08-637-654-97
; Sequence 97, Application US/08637654
; Patent No. 6358727
; GENERAL INFORMATION:
; APPLICANT: Loosmore, Sheena M
; APPLICANT: Harkness, Robin E
; APPLICANT: Schryvers, Anthony B
; APPLICANT: Chong, Pele
; APPLICANT: Gray-Owen, Scott
; APPLICANT: Yang, Yan-Ping
; APPLICANT: Murdin, Andrew D
; APPLICANT: Klein, Michel H
; TITLE OF INVENTION: HAEMOPHILUS TRANSFERRIN RECEPTOR GENES
; NUMBER OF SEQUENCES: 147
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Sim & McBurney
; STREET: 6th Floor, 330 University Avenue
; CITY: Toronto
; STATE: Ontario
; COUNTRY: Canada
; ZIP: M5G 1R7
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/637,654
; FILING DATE: 05-AUG-1996
; CLASSIFICATION: 435
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: PCT/CA94/00616
; FILING DATE:
; ATTORNEY/AGENT INFORMATION:
; NAME: Stewart, Michael I
; REGISTRATION NUMBER: 24,973
; REFERENCE/DOCKET NUMBER: 1038-595
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (416) 595-1155
; TELEFAX: (416) 595-1163
; INFORMATION FOR SEQ ID NO: 97:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 598 amino acids
; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear
US-08-637-654-97

Query Match 25.1%; Score 931.5; DB 3; Length 598;
Best Local Similarity 36.2%; Pred. No. 6.1e-59;
Matches 243; Conservative 102; Mismatches 207; Indels 119; Gaps 27;

Qy 64 GGASGSGTGSAST-----QKPKYQDVPTDKNKKDEVSIGIQEPAMGYGVLELKURN--WIPOE 116
Db 24 GGSFDFLDSVETVQDMHSKPKYEDEKSPQESQDVSNSGAAYGFAVKLPRNAHPNPKY 83
Qy 117 QEEHAKINTDVVKLEGLDKHNPDPNSIWQNIKNSKEVQTVYVNBQKNIQIKKENKEL 176
Db 84 KE-----KHKPLGSDMKLQKQEP-----NSFSRDELEKKGSGSE- 120
Qy 177 DKTALKALIEKVLDDYLTSLAKPIYERKINDSHDKONKARTDLKYVRSGYIYRSGYSNI 236
Db 121 -----LIESKWED-----GQSRVGVYNTFTYVRSGVYVILN-KNNI 154
Qy 237 DIQKKIATGFDGALFYKGTQAKQLPVSEVKYKGTWDPMTDAKKGQSFSFERRA-GDR 295
Db 155 DIKNNIVLFGPDGLYLYYKGRPEKPEKITYKGTWDTVDVTDAMEKORFEGLSAAGGDK 214

Qy 296 YSAMSSHEYPSSLTDDKXKPDNYNDEYHSHSEFTVDFSKSLTGGLFSN---LQDHHKGK 352
Db 215 SGALSALAE-EGVLRNQAESSGHTD-FGMTSEPEVDFSDTKTGTLRNNRITQNNSENK 272
Qy 353 VTKRYDINARHGNFRGSAITAINKDNESKAKHPTSDADNRLGEGFYGPNAEELAGK 412
Db 273 QIKTRYTIQATLHGNRFKGAALAAADK-GATNGSHPPFISDS-LEGGFYGPKEELAGK 330
Qy 413 FLTDDNKLFGVFGAKQ-----ESEAKETEAILDVAALGTFNKSGTTPNPAFTANSKKELD 466
Db 331 FLSNDNKAFAVFGAKQKDKKOGNAAGPATEVIDAYRI-----TGEFF---KKQID 379
Qy 467 NFGNINKLVLGSTVIDL--TQGN--EVKTIKKEKPATTTNQAGEPLTVNDKVRVCCS 522
Db 380 SFGDVKKLLVDGVVELSLPSEGNKAAAFQHEIQ-----NGVKATVCCS 422
Qy 523 NLEHLKFGSLSIGDSNSVFLQGERTATKGDKDKAMPVAGNAKYRGTWAGYVAGSGNTSKA 582
Db 423 NLDYMSFGKLSKENKDDMFLLQGVRTPV---SDVAARTEANAKYRGTWYGVIA--NGTWS 477
Qy 583 YEQQFADNANRAEFVDVFANKSI/TGKLIPTNTSSDGKS-AFDITATIDGNGFGSKANTPD 641
Db 478 GEASN-QEGGNRAEFVDVFSTKISGTL---TAKDRTSPATITAMIKDNGFGSVAKTGE 533
Qy 642 IETGGLKIDSKNSGSRVIVKDAIIVIGFYGPQANELGSGSFTYKSN-DAGNQDKDSSASV 700
Db 534 ---NGFALDPQNTGNSHYTHIEATVSGFGYKGNALENGSGSFPFGNAPEGKQEK---ASV 587
Qy 701 VFGARKQOEYK 711
Db 588 VFGAKRQQLVQ 598

RESULT 34
US-08-649-518-97
; Sequence 97, Application US/08649518
; Patent No. 6361779
; GENERAL INFORMATION:
; APPLICANT: Loosmore, Sheena
; APPLICANT: Harkness, Robin
; APPLICANT: Schryvers, Anthony
; APPLICANT: Chong, Pele
; APPLICANT: Gray-Owen, Scott
; APPLICANT: Yang, Yan-Ping
; APPLICANT: Murdin, Andrew
; APPLICANT: Klein, Michel
; TITLE OF INVENTION: Transferrin Receptor Genes
; NUMBER OF SEQUENCES: 160
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Sim & McBurney
; STREET: 6th Floor, 330 University Avenue
; CITY: Toronto
; STATE: Ontario
; COUNTRY: Canada
; ZIP: M5G 1R7
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/649,518
; FILING DATE: 17-MAY-1996
; CLASSIFICATION: 536
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/337,483
; FILING DATE: 08-NOV-1994
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/483,577
; FILING DATE: 07-JUN-1995
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/175,116
```


; FILING DATE: 29-DEC-1993
 ; PRIOR APPLICATION DATA:
 ; APPLICATION NUMBER: US 08/148,968
 ; FILING DATE: 08-NOV-1993
 ; ATTORNEY/AGENT INFORMATION:
 ; NAME: Stewart, Michael I
 ; REGISTRATION NUMBER: 24,973
 ; REFERENCE/DOCKET NUMBER: 1038-608
 ; TELECOMMUNICATION INFORMATION:
 ; TELEPHONE: (416) 595-1155
 ; TELEFAX: (416) 595-1163
 ; INFORMATION FOR SEQ ID NO: 97:
 ; SEQUENCE CHARACTERISTICS:
 ; LENGTH: 598 amino acids
 ; TYPE: amino acid
 ; STRANDEDNESS: single
 ; TOPOLOGY: linear
 ; US-08-649-518-97

Query Match 25.1%; Score 931.5; DB 3; Length 598;
 Best Local Similarity 36.2%; Pred. No. 6.1e-59;
 Matches 243; Conservative 102; Mismatches 207; Indels 119; Gaps 27;
 Qy 64 GGASGTSAST-----QKPYQDVPTDKNKDEYSGIQEPAMGYGVVELKLN--WIPOE 116
 Db 24 GGSFDDLSVETQDMHSPKPYDEKSPQSDVSENSGAAYGFAVKLPNRNHFNPXY 83
 Qy 117 QEEHAKINTNDVVKLEGLDKNPFNDSTWQNKNSKEVQTVVNOEKQNIQIKENKEL 176
 Db 84 KE-----KHKPLGSDMKKLQGEPE-----NGFSRDELEKKGSS- 120
 Qy 177 DTKALKALIEKVLDDYLTSLAKPIYEKINSHDKQNKARTDLKYVRSYIYSGVSN 236
 Db 121 -----LIESKWD-----QQSRVVGVTNFTYVRSYVLYLN-KNNI 154
 Qy 237 DIQKIATGPDGALFYKGTOTAKOLPVSEVKYKGTWDMTDKAGQSFSSFERRA-GDR 295
 Db 155 DIKNIVLFGPDGVLVYKGPSPKELPSEKITYKGTWDTVIDAMEKQRFGLGSAAGDK 214
 Qy 296 YSAMSSEYPSLLTDDKKNPNYNDYEGHSEFTVDFSKSLTGLFSN---LQDHKKG 352
 Db 215 SGALSAL-EGVLRNQAESSGHTD-FGWTSEFEVDFSDTKIKGLYRNRIITQNSNK 272
 Qy 353 VTKYRYDINARIHGNRFRGSATANKONESKAKHPFTSDADNRLEGFGYGNABEELAGK 412
 Db 273 QIKTRYTIQATLHGNRFGKALAADK-GATNGSHPFISDS-LEGFGYGPKEELAGK 330
 Qy 413 FLTDNKLFGVFGAKQ-----ESEKETEALIDAYALGTNKSQTTNPAFTANSKELD 466
 Db 331 FLSDNKAFAVFGAKQKDKGCGNAAGPATVIDAIRI-----TGEEF---KKGQID 379
 Qy 467 NFGNINKLVLGSTVIDL--TGND--FVKTIKKEKPATTTNQAQEPVTNDKVRVQVCCS 522
 Db 380 SFGDVKKLLVDGVELSLPSEGNAAFQHEIEQ-----NGVKATVCCS 422
 Qy 523 NLEHLKPSGLSIGDSNVFLQERTATKGDKDKAMPVAGNAKYKGTWAGYVAGSGNTSKA 582
 Db 423 NLDYMSFGKSKENKDDMFLQGVTPV---SDVAARTEANAKYRGTYGYIA--NGTSWS 477
 Qy 583 YEAQFADNARAFDVPDFANKSLTGKLIPTSSDGKS-AFDITATIDGNSFGSKANTPD 641
 Db 478 GEASN-OEGGNARFDPDVFSTKISGTL---TAKDRTSAPFTITAMIKDNQNSFGVAKTGE 533
 Qy 642 IETGLKIDSKNSGRVIVKDAIVIGFGYFQANELGGSFTYKSN-DAGNQDKDSSASV 700
 Db 534 ---NGFALDPQNTGNSHYTHIEATVSGFGYKNAIEMGSGSFPQNAPEGKQEK---ASV 587
 Qy 701 VFGARKQOEK 711
 Db 588 VFGAKRQLVQ 598

RESULT 35

US-07-961-522-4
 ; Sequence 4, Application US/07961522
 ; Patent No. 5417971
 ; GENERAL INFORMATION:
 ; APPLICANT: POTTER, ANDREW A.
 ; APPLICANT: GELACH, GERALD F.
 ; APPLICANT: WILLSON, PHILIP J.
 ; APPLICANT: ROSSI-CAMPOS, AMALIA
 ; TITLE OF INVENTION: VACCINES FOR ACTINOBACILLUS
 ; TITLE OF INVENTION: PLEURO-PNEUMONIAE
 ; NUMBER OF SEQUENCES: 9
 ; CORRESPONDENCE ADDRESS:
 ; ADDRESSEE: ROBERTA L. ROBINS
 ; STREET: 635 BRYANT STREET
 ; CITY: PALO ALTO
 ; STATE: CALIFORNIA
 ; COUNTRY: UNITED STATES OF AMERICA
 ; ZIP: 94301
 ; COMPUTER READABLE FORM:
 ; MEDIUM TYPE: Floppy disk
 ; COMPUTER: IBM PC compatible
 ; OPERATING SYSTEM: PC-DOS/MS-DOS
 ; SOFTWARE: Patent In Release #1.0, Version #1.25
 ; CURRENT APPLICATION DATA:
 ; APPLICATION NUMBER: US/07/961,522
 ; FILING DATE: 19921015
 ; CLASSIFICATION: 435
 ; ATTORNEY/AGENT INFORMATION:
 ; NAME: ROBINS, ROBERTA L.
 ; REGISTRATION NUMBER: 33,208
 ; REFERENCE/DOCKET NUMBER: 9000-0015.20
 ; TELECOMMUNICATION INFORMATION:
 ; TELEPHONE: (415) 617-8999
 ; TELEFAX: (415) 327-3231
 ; INFORMATION FOR SEQ ID NO: 4:
 ; SEQUENCE CHARACTERISTICS:
 ; LENGTH: 593 amino acids
 ; TYPE: AMINO ACID
 ; STRANDEDNESS: single
 ; TOPOLOGY: linear
 ; MOLECULE TYPE: peptide
 ; US-07-961-522-4

Query Match 24.6%; Score 913; DB 1; Length 593;
 Best Local Similarity 34.5%; Pred. No. 1.3e-57;
 Matches 252; Conservative 86; Mismatches 227; Indels 164; Gaps 28;
 Qy 3 HIPLTLCVAISAVLLTACGGSGSNPPATPIPNAGGAGNAGSGTGAGSTD-NAANAG 61
 Db 2 HFKLNPVALAFTSLFLVAC-----SGKSGSFDLEDVRPN 35
 Qy 62 STGASGTSASQPKPYQDVPTDKNKDEYSGIQEPAMGYGVVELKLNWIPOEQA 121
 Db 36 QTAKEKATTS-----YQDEETKKTKBELDKLMEPALGYETQILRRNKAP--KTETG 86
 Qy 122 KINTNDVVKLEGLDKNPFNDSTWQNKNSKEVQTVVNOEKQNIQIKENKELDTAL 181
 Db 87 EKXNERVVELSED-----KITKLYQESVEIIPH-----LDE--- 117
 Qy 182 KALIEKVLDDYLTSLAKPIYEKINSHDKQNKARTDLKYVRSYIYSGVSN---DI 238
 Db 118 -----LNGKTS-----NDVYHSHDKRLDKNRDLKYVRSYIYSGVSNFNRNDS 163
 Qy 239 QKKIATGPDGALFYKGTOTAKOLPVSEV-KYGTWDMTDKAGQSFSSFERRA-GDRY 296
 Db 164 GFHVFKGIGYVYLVGVTSKELPKGKVISYKGTWDFVSNINLERIDGDTSGDGKNV 223
 Qy 297 SAMSSEYPSLLTDDKKNPNYNDYEG-----HSSEFTVDFSKSLTGLFSNLQDH 348
 Db 224 SATS-----ITETVNRDVKVGEKLDGNEVKGVASSEFAVDPDNKKLTGSLYRNGYN 276
 Qy 349 HGGKVTYTKYDYNARIHGNRFRGSATANKONESKAKHPFTSDADNRLEGFGYGNABE 408

Db 277 RNKAQEVTKRYSIEDIAGNFRGKAKA-----EKAGDPIFTDS-NYLEGGFYGPKAEE 329
Qy 409 LAGFLTDNDKLFVGFAGQSEAKETEAILDAYALGTFNKSGTTNPAFTANSKKELDNF 468
Db 330 MAGKFFTNKSLFAVFAAKSENGETTTIERIIDA-----TKIDLTOFNAKELNNF 378
Qy 469 GNINKLVGSTVIDLTQGNDF--VKTIDKEKPAATTNQAGEPLVNDKVRQV--CCSNLE 525
Db 379 GDASVLIIDGQKIDLA-GVNFKNKSTVE-----INGKTWVAVACCSNLE 421
Qy 526 HLKESGL-----SIGDSNSVFLOGERTATKGDKAMPVAGNAKYRGTWAGVVASGN 578
Db 422 YMKFGQLWQKEGKQOQVD--NSLFLQGBERTAT-----DK-MPAGGNYKYVGTWDLV--SKG 473
Qy 579 TSKAYEAQQFADNANRAEFVDVFNKSLTGKLIPTNTSSDGKSAFDITATIDNGFGSKAN 638
Db 474 TNWIAEADNNRESGYRTEFDVNFSDKKVNGKLPKGGVN--PVFTVDATINGNGFIGSAK 531
Qy 639 TPDIETGGLKIDSKNSSESGRVIIVKDAIVIGGFYGPQANELGGSFTYKSNDAQNQKDS 698
Db 532 TSD---SGFALDAGSSQHGNAVFSDIKVNGGFYGTAGELGGQPHHKS-----NGSV 581
Qy 699 SVVFGARKQOE 709
Db 582 GAVFGAKRQIE 592

RESULT 36
US-08-217-438-4
; Sequence 4, Application US/08217438
; Patent No. 5521072
; GENERAL INFORMATION:
; APPLICANT: Potter, Andrew A.
; APPLICANT: Gerlach, Gerald F.
; APPLICANT: Willson, Philp J.
; APPLICANT: Rossi-Campos, Amalia
; TITLE OF INVENTION: ACTINOBACILLUS PLEUROPNEUMONIAE
; NUMBER OF SEQUENCES: 11
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Reed & Robins
; STREET: 635 Bryant Street
; CITY: Palo Alto
; STATE: California
; COUNTRY: USA
; ZIP: 94301
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/217,438
; FILING DATE: 22-MAR-1994
; CLASSIFICATION: 435
; ATTORNEY/AGENT INFORMATION:
; NAME: Robins, Roberta L.
; REGISTRATION NUMBER: 33,208
; REFERENCE/DOCKET NUMBER: 9001-0015.01
; TELEPHONE: 415-617-8999
; TELEFAX: 415-327-3231
; TELEX:
; INFORMATION FOR SEQ ID NO: 4:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 593 amino acids
; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear

Query Match 24.6%; Score 913; DB 1; Length 593;
Best Local Similarity 34.5%; Pred. No. 1.3e-57;

Matches 252; Conservative 88; Mismatches 227; Indels 164; Gaps 28;
Qy 3 HIPLTTLICVAISALLTACGSGSGSNPPAPTPIPAGAGNAGSGTGAGSTD-NAANAG 61
Db 2 HFKLNPVALAFTSLFLVAC-----SGKSGSFDLEDVRPN 35
Qy 62 STGGAASGTASSTQPKYQDVPTDKNKDEVSIGIOEPAMGYGVELKLRNWIPOEQEHA 121
Db 36 QTAKEAKATTS-----YQDEETKKTKBELDKLMEPALGYETQILRRNKAP--KTETG 86
Qy 122 KINTNDVVKLEGLDKNPFPDINSIQNLKNSKEVQTVVYNQEKQNIENQIKKENELDKTAL 181
Db 87 EKNERVVELSED-----KITKLQYESVEIIPH-----LDE--- 117
Qy 182 KALIEKVLDDYLSLAKPIYEKININDSHDKONKARTDLKYVRSGYTYRSGYSNI---DI 238
Db 118 -----LNGKITS-----NDVYHSHDSKRLDKNEDLKYVRSYVYDGSFNEIRNDS 163
Qy 239 QKXIAKTGFPGALFYKGTQTAQOLPVSEV--KYKGTWDFMTDAKKQGSFERRA--GDRY 296
Db 164 GFHVFKQIGDYVYVLGVTPTSKELPKGVISYKGTWDFVSNINLEREIDGFTSDGDKNV 223
Qy 297 SAMSSHEYPSSLTDDKNKPDNYDEYV-----HSSEFTVDFSKSLTGLPSNLQDH 348
Db 224 SATS-----ITETVNRDHHKVGKLDGNEVKVGHSSSEFAVDNDKKLTGSLRYNGYIN 276
Qy 349 HKGKVTYTKRYDINARIHGNRFRGSSATAINKDNESAKHPFTSDADNRLGGFYGPNAEE 408
Db 277 RNKAQEVTKRYSIEDIAGNFRGKAKA-----EKAGDPIFTDS-NYLEGGFYGPKAEE 329
Qy 409 LAGFLTDNDKLFVGFAGQSEAKETEAILDAYALGTFNKSGTTNPAFTANSKKELDNF 468
Db 330 MAGKFFTNKSLFAVFAAKSENGETTTIERIIDA-----TKIDLTOFNAKELNNF 378
Qy 469 GNINKLVGSTVIDLTQGNDF--VKTIDKEKPAATTNQAGEPLVNDKVRQV--CCSNLE 525
Db 379 GDASVLIIDGQKIDLA-GVNFKNKSTVE-----INGKTWVAVACCSNLE 421
Qy 526 HLKESGL-----SIGDSNSVFLOGERTATKGDKAMPVAGNAKYRGTWAGVVASGN 578
Db 422 YMKFGQLWQKEGKQOQVD--NSLFLQGBERTAT-----DK-MPAGGNYKYVGTWDLV--SKG 473
Qy 579 TSKAYEAQQFADNANRAEFVDVFNKSLTGKLIPTNTSSDGKSAFDITATIDNGFGSKAN 638
Db 474 TNWIAEADNNRESGYRTEFDVNFSDKKVNGKLPKGGVN--PVFTVDATINGNGFIGSAK 531
Qy 639 TPDIETGGLKIDSKNSSESGRVIIVKDAIVIGGFYGPQANELGGSFTYKSNDAQNQKDS 698
Db 532 TSD---SGFALDAGSSQHGNAVFSDIKVNGGFYGTAGELGGQPHHKS-----NGSV 581
Qy 699 SVVFGARKQOE 709
Db 582 GAVFGAKRQIE 592

RESULT 37
US-08-217-438-5
; Sequence 5, Application US/08217438
; Patent No. 5521072
; GENERAL INFORMATION:
; APPLICANT: Potter, Andrew A.
; APPLICANT: Gerlach, Gerald F.
; APPLICANT: Willson, Philp J.
; APPLICANT: Rossi-Campos, Amalia
; TITLE OF INVENTION: ACTINOBACILLUS PLEUROPNEUMONIAE
; NUMBER OF SEQUENCES: 11
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Reed & Robins
; STREET: 635 Bryant Street
; CITY: Palo Alto
; STATE: California
; COUNTRY: USA

ZIP: 94301
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patent in Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/217,438
FILING DATE: 22-MAR-1994
CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: Robins, Roberta L.
REGISTRATION NUMBER: 33,208
REFERENCE/DOCKET NUMBER: 9001-0015.01
TELECOMMUNICATION INFORMATION:
TELEPHONE: 415-617-8999
TELEFAX: 415-327-3231
TELEX:
INFORMATION FOR SEQ ID NO: 5:
SEQUENCE CHARACTERISTICS:
LENGTH: 593 amino acids
TYPE: amino acid
STRANDEDNESS: single
TOPOLOGY: linear
US-08-217-438-5

Query Match 24.6%; Score 913; DB 1; Length 593;
Best Local Similarity 34.5%; Pred. No. 1.3e-57;
Matches 252; Conservative 88; Mismatches 227; Indels 164; Gaps 28;

Qy 3 HIPITLTCVAILTACGGSGSNPPATPIPNAGGAGNAGSGTGAGSTD-NAANAG 61
Db 2 HFKLNPYALFTSLFLVAC-----SGKGSGFDLEDVRPN 35
Qy 62 STGGASSTGASTQPKYQDVPTDKNKKDEVSGIQEPAMGVGVELKLRNWIPOQEESHA 121
Db 36 QTAARAKATTS-----YQBEETKTKKELDKLMEPALGYETQILRRNKAP--KTETG 86
Qy 122 KINTNDVVLKGLKHPNFDNSIWNINKSEVQTVNQEOKNTENQIKENKELDKTAL 181
Db 87 EKNRNVVELSED-----KITKLQESVEIIPH-----LDE--- 117
Qy 182 KALIEKVLDDVLTSLAKPIYEKNINDSHDKQNKARTDLKVRSGYIYRSGYSNI---DI 238
Db 118 -----LNGKTT-----NDVTHSHDSKRLDKNRLKVRSGYVYDGSFNEIRNDS 163
Qy 239 QKTIAGTFDGLFYGTQAKQLPVSEV-KYKGTWDFMTDAKKGQSPSSPERRA-GDXY 296
Db 164 GFHVFKQIDGVVYLVGTPSKELPKGVISKGTWDFVSNINLEREIDGFTSGDGKVV 223
Qy 297 SAMSSHEVPSLLTDDKKNPDYNDYEG-----HSSEFTVDFSKSLTGGLFSNLQDH 348
Db 224 SATS-----ITETVNRDHKVGKLGDNVEKVAHSSEFAVDFDNKKLTGSLYRNGYIN 276
Qy 349 HGKVKTKRVDINARIGHNFRGSATAINKDNESKAKHPTSDADNLEGGFYCPNARE 408
Db 277 RNKAQEVTKRYSIEADIAGNFRGAKA-----EKAGDPITFDS-NYLEGGFYGPKAEE 329
Qy 409 LAGKFLTDNKLFGVFGKQESAEKETEAILDAVALGTFFNKSGLTNPATFANSKELDNF 468
Db 330 MAGKFTNKSFLFAVFAKSENGETTTTIRIDA-----TKIDLTQFNKELNLF 378
Qy 469 GNINKVLGSTDVIDITQGNDF--VKTIDKEPATTTNOAGEPLTVNDKRVQV--CCSNLE 525
Db 379 GDASVLIIDGQKIDLA-GVNFKNSKTV-----INGKTMVAVACCSNLE 421
Qy 526 HLKRGSL-----SIGSNSVFLOGERTATKGDKDKAMPVAGNAKYKGTWAGYVAGSN 578
Db 422 YMKFGQLWQKGGKQKQVVD--NSLFLQGERTAT-----DK-MPAGGNYKYVGTWDALV--SKG 473
Qy 579 TSKAYEAQFADNANRAEFDFDANKSLTGKLIPTSSDGKSAFDITATDNGFGPSKAN 638
Db 474 TNWAEADNNRESGVRTETFDNFSDKVKNGKLFDKGGVN--PVFTVDATINGNGFIGSAK 531

Qy 639 TPDITGGLKIDSKNSSESRVIVKDAIVIGFYGPQANELGGSFTYKSNAGNQDKDSSA 698
Db 532 TSD---SGFALDAGSSQHGNAVPSDIKVNKGFGFYGTAGELGGQPHKSD-----NGSV 581
Qy 699 SVVFEGARKQOE 709
Db 582 GAVEGAKRQIE 592

RESULT 38

US-08-487-890A-100
Sequence 100, Application US/08487890A
Patent No. 5708149
GENERAL INFORMATION:
APPLICANT: Loosmore, Sheena
APPLICANT: Harkness, Robin
APPLICANT: Schryvers, Anthony
APPLICANT: Chong, Pele
APPLICANT: Gray-Owen, Scott
APPLICANT: Yang, Yan-Ping
APPLICANT: Murdin, Andrew
APPLICANT: Klein, Michel
TITLE OF INVENTION: Transferrin Receptor Genes
NUMBER OF SEQUENCES: 147
CORRESPONDENCE ADDRESS:
ADDRESSEE: Sim & McBurney
STREET: 6th Floor, 330 University Avenue
CITY: Toronto
STATE: Ontario
COUNTRY: Canada
ZIP: M5G 1R7

COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patent in Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/487,890A
FILING DATE: 07-JUN-1993
CLASSIFICATION: 435

PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/175,116
FILING DATE: 29-DEC-1993
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/148,968
FILING DATE: 08-NOV-1993
ATTORNEY/AGENT INFORMATION:
NAME: Stewart, Michael I
REGISTRATION NUMBER: 24,973
REFERENCE/DOCKET NUMBER: 1038-466 MIS:jfb
TELECOMMUNICATION INFORMATION:
TELEPHONE: (416) 595-1155
TELEFAX: (416) 595-1163
INFORMATION FOR SEQ ID NO: 100:
SEQUENCE CHARACTERISTICS:
LENGTH: 593 amino acids
TYPE: amino acid
STRANDEDNESS: single
TOPOLOGY: linear
US-08-487-890A-100

Query Match 24.6%; Score 913; DB 1; Length 593;
Best Local Similarity 34.5%; Pred. No. 1.3e-57;
Matches 252; Conservative 88; Mismatches 227; Indels 164; Gaps 28;

Qy 3 HIPITLTCVAILTACGGSGSNPPATPIPNAGGAGNAGSGTGAGSTD-NAANAG 61
Db 2 HFKLNPYALFTSLFLVAC-----SGKGSGFDLEDVRPN 35
Qy 62 STGGASSTGASTQPKYQDVPTDKNKKDEVSGIQEPAMGVGVELKLRNWIPOQEESHA 121
Db 36 QTAARAKATTS-----YQBEETKTKKELDKLMEPALGYETQILRRNKAP--KTETG 86

RESULT 40

US-08-710-584-4
; Sequence 4, Application US/08710584
; Patent No. 5876725
; GENERAL INFORMATION:
; APPLICANT: POTTER, ANDREW A.
; APPLICANT: GERLACH, GERALD F.
; APPLICANT: WILLSON, PHILIP J.
; APPLICANT: ROSSI-CAMPOS, ANALLIA
; TITLE OF INVENTION: VACCINES FOR ACTINOBACILLUS
; TITLE OF INVENTION: PLEURO-PNEUMONIAE
; NUMBER OF SEQUENCES: 9
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: ROBERTA L. ROBINS
; STREET: 285 HAMILTON AVE, SUITE 200
; CITY: PALO ALTO
; STATE: CALIFORNIA
; COUNTRY: UNITED STATES OF AMERICA
; ZIP: 94301
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patent In Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/710,584
; FILING DATE:
; CLASSIFICATION:
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/321,978
; FILING DATE: 12-OCT-1994
; ATTORNEY/AGENT INFORMATION:
; NAME: ROBINS, ROBERTA L.
; REGISTRATION NUMBER: 33,208
; REFERENCE/DOCKET NUMBER: 9001-0015.02
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (415) 327-3400
; TELEFAX: (415) 327-3231
; INFORMATION FOR SEQ ID NO: 4:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 593 amino acids
; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; MOLECULE TYPE: peptide
US-08-710-584-4

Query Match 24.6%; Score 913; DB 2; Length 593;
Best Local Similarity 34.5%; Pred. No. 1.3e-57;
Matches 252; Conservative 88; Mismatches 227; Indels 164; Gaps 28;
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DB 2 HPLNLYALAFSLFLVAC-----SGGKGSFDLEDVRPN 35
QY 62 STGGASSGTGSASTQPKYQDVPTDNKKDEVSGIQEPAMGYGVBLKLRNWIPOQEHA 121
DB 36 QTAKEAKATTS-----YQDEBTKTKKEELDKLMEPALGVETQILRRNAP--KTETG 86
QY 122 KINTNDVVKLEGLDKNHFPDINSIQWIKNSKEVQVYVNOEKQNIENQIKKENKELDKTAL 181
DB 87 EKNRERVVELSED-----KITKLYQESVEIIPH-----LDE--- 117
QY 182 KALIEKVLDDYLTSLAKPIYEKNINDSHDKONKARTDLKIVRSYIVYRSGYSNI---DI 238
DB 118 -----LNGKTT-----NDVTHSHDSKELDKNRLKIVRSYIVYDGSFNEIRNDS 163
QY 239 QKKIATGFDGALFYKGTQAKQLPVSFV-KYKGTWDFMTDAKKQCSFERRA-GDRY 296
DB 164 GFHVFKQIGDGVVYLVGTPSKELPKGVISYKGTWDFVSNINLEREIDGPDTSKGKRV 223
QY 297 SAMSSHEYPSSLTDDKNKPDNDYDYG-----HSSEFTVDFSKSLTGGLFSNLQDH 348

DB 224 SATS-----ITETVRDHHKVGKLGDNVEKVAHSEFAVDENKKTLSLFRNGVIN 276
QY 349 HGVKVTYTKRYDINARIHGNFRGSATAINKDNESKAKHPTSDADNRLEGGFYGPNABE 408
DB 277 RNKAQEVTKRYSIEADIAGNFRGRKAKA-----EKAGDPIFTDS-NYLEGGFYGPKAEE 329
QY 409 LAGKFLTDNKLFGVFGAKQSEAKETEAILDAYALGTFFNKSQGTNPAPFTANSKKELENF 468
DB 330 MAGKFTTNKSLFAVFAKSENGETTTTTERIIIDA-----TKIDLTOFNAKELNNF 378
QY 469 GNINKVLGSLVIDLTOGNDF--VKTIIDKEKPAITTTNOAGEPLTVNDKVRQV--CCSNLE 525
DB 379 GDASVLIIDGQKIDLA-GVNFNKSQVTE-----INGKTMVAVACCSNLE 421
QY 526 HLKFGSL-----SIGDSNSVFLQGTERTATYKDKKAMPVAGNAKYRGTWAGYVAGSGN 578
DB 422 YMKFGQLWQKRGKQKVQKQD-NSLFLQGTERTAT---DK-MPAGGNVYKVGTTWDALV--SKG 473
QY 579 TSKAYEAQOFADNANRAEFVDVPANKSLTGKLIPTNTSSDGKSAFDITATIDNGFSGKAN 638
DB 474 TNWIAEADNNRESGYRTEFDVNFSDKKVNGKLPDKGGVN--PVFTVDATINGNGFISAK 531
QY 639 TPDITETGLKIDSKNSRSGRVIVKDAIVIGGFYGPQANELGSGSPTYKSNDAQNDKSSA 698
DB 532 TSD---SGFALDAGSSQHGNAVFSIDIKVNGGFGYPTAGELGQGFHKKSD-----NGSV 581
QY 699 SVVFGARKQOE 709
DB 582 GAVFGAKRQIE 592

Search completed: February 23, 2005, 20:23:14
Job time : 33.061 secs

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GenCore version 5.1.6
Copyright (c) 1993 - 2005 Compugen Ltd.

OM protein - protein search, using sw model

Run on: February 23, 2005, 20:07:47 ; Search time 25.8414 Seconds
(without alignment)
2039.451 Million cell updates/sec

Title: US-09-673-133-2
Perfect score: 3690
Sequence: 1 MKHPLTLCVAISAVLLTA.....NTDDSKASVPGTKRQSEVK 706

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 513545 seqs, 74649064 residues

Total number of hits satisfying chosen parameters: 513545

Minimum DB seq length: 0
Maximum DB seq length: 2000000000
Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : Issued Patents AA:
1: /cgn2_6/ptodata/1/iaa/5A_COMB.pep:*
2: /cgn2_6/ptodata/1/iaa/5B_COMB.pep:*
3: /cgn2_6/ptodata/1/iaa/6A_COMB.pep:*
4: /cgn2_6/ptodata/1/iaa/6B_COMB.pep:*
5: /cgn2_6/ptodata/1/iaa/PCTUS_COMB.pep:*
6: /cgn2_6/ptodata/1/iaa/backfiles1.pep:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	ID	Description
1	3690	100.0	706	4	US-09-059-584-46
2	3204	86.8	702	3	US-08-613-009A-9
3	3204	86.8	702	4	US-08-778-570B-11
4	3204	86.8	702	2	US-09-059-584-11
5	3200	86.7	702	2	US-08-867-941-25
6	3200	86.7	702	3	US-09-074-658-25
7	3107	84.2	682	3	US-08-613-009A-10
8	3107	84.2	682	4	US-08-778-570B-12
9	3107	84.2	682	4	US-09-059-584-12
10	3009	81.5	713	4	US-09-059-584-49
11	2365.5	64.1	709	4	US-08-778-570B-15
12	2365.5	64.1	709	4	US-09-059-584-15
13	2268.5	61.5	689	4	US-08-778-570B-16
14	2268.5	61.5	689	4	US-09-059-584-15
15	2246.5	60.9	713	4	US-09-059-584-53
16	1891	51.2	702	2	US-08-949-941B-2
17	1884.5	51.1	712	4	US-09-059-584-51
18	1574	42.7	416	4	US-09-540-236-2388
19	863.5	23.4	662	3	US-09-405-728-3
20	852	23.1	601	3	US-08-613-009A-20
21	852	23.1	601	4	US-08-778-570B-26
22	852	23.1	601	4	US-09-059-584-26
23	844	22.9	599	3	US-08-448-194-2
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25	840.5	22.8	578	3	US-08-448-194-61
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27	833.5	22.6	598	1	US-08-487-890A-97

28	833.5	22.6	598	2	US-08-478-435-97
29	833.5	22.6	598	2	US-08-337-483-97
30	833.5	22.6	598	2	US-08-478-373-97
31	833.5	22.6	598	3	US-08-474-671-97
32	833.5	22.6	598	3	US-08-483-577A-97
33	833.5	22.6	598	3	US-08-897-438-97
34	833.5	22.6	598	3	US-08-637-654-97
35	833.5	22.6	598	3	US-08-649-518-97
36	832.5	22.6	593	1	US-07-961-522-4
37	832.5	22.6	593	1	US-08-217-438-4
38	832.5	22.6	593	1	US-08-487-890A-100
39	832.5	22.6	593	1	US-08-321-978-4
40	832.5	22.6	593	2	US-08-710-584-4
41	832.5	22.6	593	2	US-08-478-435-100
42	832.5	22.6	593	2	US-08-337-483-100
43	832.5	22.6	593	2	US-08-478-373-100
44	832.5	22.6	593	2	US-08-478-373-100
45	832.5	22.6	593	3	US-08-474-671-100

ALIGNMENTS

RESULT 1
US-09-059-584-46 Application US/09059584
; Sequence 46
; Patent No. 6440701
; GENERAL INFORMATION:
; APPLICANT: Myers, Lisa E
; APPLICANT: Schryvers, Anthony B
; APPLICANT: Harkness, Robert E
; APPLICANT: Lockmore, Steena M.
; APPLICANT: Du, Katerian
; APPLICANT: Yang, Yan-Ping
; APPLICANT: Klein, Michel H
; TITLE OF INVENTION: Transferrin Receptor Genes of Moraxella
; NUMBER OF SEQUENCES: 60
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Sim & McBurney
; STREET: 6th Floor, 330 University Avenue
; CITY: Toronto
; STATE: Ontario
; COUNTRY: Canada
; ZIP: M5G 1R7
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patentin Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/09/059,584
; FILING DATE: 14-APR-1998
; CLASSIFICATION:
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/778,570
; FILING DATE: 03-JAN-1997
; CLASSIFICATION:
; ATTORNEY/AGENT INFORMATION:
; NAME: Stewart, Michael I
; REGISTRATION NUMBER: 24973
; REFERENCE/DOCKET NUMBER: 1038-794
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (416) 595-1155
; TELEFAX: (416) 595-1163
; INFORMATION FOR SEQ ID NO: 46:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 706 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
US-09-059-584-46

Query Match 100.0%; Score 3690; DB 4; Length 706;
Best Local Similarity 100.0%; Pred. No. 2e-243;

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Matches 706; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
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Db 1 MKHPLTTLCAVSAVLLTACGGSGSNPPAPTIPNAGSGNTGNTAGGTDNTANAG 60
Qy 61 NTGTSNGTSGTANTPEPKYKDVPTDENKKDVSIGIQBPAMGYGMAKSKMLHKKQDTPLD 120
Db 61 NTGTSNGTSGTANTPEPKYKDVPTDENKKDVSIGIQBPAMGYGMAKSKMLHKKQDTPLD 120
Qy 121 EKDIITLDGKQVAKGKSPPLPSLDVENKLLDGYIAKNEADKNAIGDRIKKNKDKSL 180
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Db 181 SKAELAKQIKEDVRKSHFQVLSLKNKIPHSNDGTTKATRDLOVVDYGYLVNDGNY 240
Qy 241 LTVKTDLMNLGPGVGVYNGTTAKELPTQDAVKYKGHWDFMTDVAQKRNRFSEVKENL 300
Db 241 LTVKTDLMNLGPGVGVYNGTTAKELPTQDAVKYKGHWDFMTDVAQKRNRFSEVKENL 300
Qy 301 QAGRYYGASSKDEYNRLLTDEKNKPERYNGEYGHSSSEFTVNFKDKLTGELFSLNLDQRK 360
Db 301 QAGRYYGASSKDEYNRLLTDEKNKPERYNGEYGHSSSEFTVNFKDKLTGELFSLNLDQRK 360
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Db 361 GNVTKTKRYDIDANIYGNRFRGSATASDKAASKTKHPFTSDAKNSLEGGFYGNABELA 420
Qy 421 GKFLTNDNKLFGVFGAKRESKAGEKTEAILDAYALGTFFNKNNAATFTPTFKKQLDNFGNA 480
Db 421 GKFLTNDNKLFGVFGAKRESKAGEKTEAILDAYALGTFFNKNNAATFTPTFKKQLDNFGNA 480
Qy 481 KKLVLGSTDVLDVPTGTVTKDNETKPKPSATNKAETLWMDKVSVKYGYGRNFEYL 540
Db 481 KKLVLGSTDVLDVPTGTVTKDNETKPKPSATNKAETLWMDKVSVKYGYGRNFEYL 540
Qy 541 KFGELSVGTSNSVFLQGERATATCEKAVPTKGTAKYLGNNWVGYITGKDSKSFNEAODVA 600
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Db 661 IVIKDAEVTGGFYGNANEMGGSTHNTDSDKASVVFGRKQREVK 706

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RESULT 2

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US-08-613-009A-9
; Sequence 9, Application US/08613009A
; Patent No. 6090576
; GENERAL INFORMATION:
; APPLICANT: Myers, Lisa E
; APPLICANT: Schryvers, Anthony B
; APPLICANT: Harkness, Robin E
; APPLICANT: Loosmore, Sheena M.
; APPLICANT: Du, Run-Pan
; APPLICANT: Yang, Yan-Ping
; APPLICANT: Klein, Michel H
; TITLE OF INVENTION: Transferrin Receptor Genes of Moraxella
; NUMBER OF SEQUENCES: 31
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Sim & McBurney
; STREET: 6th Floor, 330 University Avenue
; CITY: Toronto
; STATE: Ontario
; COUNTRY: Canada
; ZIP: M5G 1R7
; COMPUTER READABLE FORM:

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; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.30
; CURRENT APPLICATION DATA: US/08/613,009A
; APPLICATION NUMBER: US/08/613,009A
; FILING DATE: 08-MAR-1996
; CLASSIFICATION: 435
; ATTORNEY/AGENT INFORMATION:
; NAME: Stewart, Michael I
; REGISTRATION NUMBER: 24973
; REFERENCE/DOCKET NUMBER: 1038-542
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (416) 595-1155
; TELEFAX: (416) 595-1163
; INFORMATION FOR SEQ ID NO: 9:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 702 amino acids
; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; US-08-613-009A-9

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Query Match 86.8%; Score 3204; DB 3; Length 702;
Best Local Similarity 87.2%; Pred. No. 2.8e-210;
Matches 619; Conservative 39; Mismatches 40; Indels 12; Gaps 5;

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Qy 1 MKHPLTTLCAVSAVLLTACGGSGSNPPAPTIPNAGSGNTGNTAGGTDNTANAG 60
Db 1 MKHPLTTLCAVSAVLLTACGGSGSNPPAPTIPNAGSGNTGNTAGGTDNTANAG 60
Qy 61 NTGTSNGTSGTANTPEPKYKDVPTDENKKDVSIGIQBPAMGYGMAKSKMLHKKQDTPLD 120
Db 61 NTGTSNGTSGTANTPEPKYKDVPTDENKKDVSIGIQBPAMGYGMAKSKMLHKKQDTPLD 120
Qy 121 EKDIITLDGKQVAKGKSPPLPSLDVENKLLDGYIAKNEADKNAIGDRIKKNKDKSL 180
Db 121 EKDIITLDGKQVAKGKSPPLPSLDVENKLLDGYIAKNEADKNAIGDRIKKNKDKSL 180
Qy 181 SKAELAKQIKEDVRKSHFQVLSLKNKIPHSNDGTTKATRDLOVVDYGYLVNDGNY 240
Db 181 SKAELAKQIKEDVRKSHFQVLSLKNKIPHSNDGTTKATRDLOVVDYGYLVNDGNY 240
Qy 179 SDBELAKQIKEDVRKSHFQVLSLKNKIPHSNDGTTKATRDLOVVDYGYLVNDGNY 238
Db 179 SDBELAKQIKEDVRKSHFQVLSLKNKIPHSNDGTTKATRDLOVVDYGYLVNDGNY 238
Qy 241 LTVKTDLMNLGPGVGVYNGTTAKELPTQDAVKYKGHWDFMTDVAQKRNRFSEVKENL 300
Db 241 LTVKTDLMNLGPGVGVYNGTTAKELPTQDAVKYKGHWDFMTDVAQKRNRFSEVKENL 300
Qy 301 QAGRYYGASSKDEYNRLLTDEKNKPERYNGEYGHSSSEFTVNFKDKLTGELFSLNLDQRK 360
Db 301 QAGRYYGASSKDEYNRLLTDEKNKPERYNGEYGHSSSEFTVNFKDKLTGELFSLNLDQRK 360
Qy 361 GNVTKTKRYDIDANIYGNRFRGSATASDKAASKTKHPFTSDAKNSLEGGFYGNABELA 420
Db 361 GNVTKTKRYDIDANIYGNRFRGSATASDKAASKTKHPFTSDAKNSLEGGFYGNABELA 420
Qy 421 GKFLTNDNKLFGVFGAKRESKAGEKTEAILDAYALGTFFNKNNAATFTPTFKKQLDNFGNA 480
Db 421 GKFLTNDNKLFGVFGAKRESKAGEKTEAILDAYALGTFFNKNNAATFTPTFKKQLDNFGNA 480
Qy 481 KKLVLGSTDVLDVPTGTVTKDNETKPKPSATNKAETLWMDKVSVKYGYGRNFEYL 540
Db 481 KKLVLGSTDVLDVPTGTVTKDNETKPKPSATNKAETLWMDKVSVKYGYGRNFEYL 540
Qy 541 KFGELSVGTSNSVFLQGERATATCEKAVPTKGTAKYLGNNWVGYITGKDSKSFNEA 596
Db 541 KFGELSVGTSNSVFLQGERATATCEKAVPTKGTAKYLGNNWVGYITGKDSKSFNEA 596
Qy 533 KFGELSVGTSNSVFLQGERATATCEKAVPTKGTAKYLGNNWVGYITGKDSKSFNEA 592
Db 533 KFGELSVGTSNSVFLQGERATATCEKAVPTKGTAKYLGNNWVGYITGKDSKSFNEA 592
Qy 597 QDVADFDIDFEKSKVKGKLTTRKQDQPVFNITGDIAGNGWTGKASTTKADAGGYKIDSSS 656
Db 597 QDVADFDIDFEKSKVKGKLTTRKQDQPVFNITGDIAGNGWTGKASTTKADAGGYKIDSSS 656
Qy 593 QDVADFDIDFEKSKVKGKLTTRKQDQPVFNITGDIAGNGWTGKASTTKADAGGYKIDSSS 652
Db 593 QDVADFDIDFEKSKVKGKLTTRKQDQPVFNITGDIAGNGWTGKASTTKADAGGYKIDSSS 652
Qy 657 TGKSVIVIKDAEVTGGFYGNANEMGGSTHNTDSDKASVVFGRKQREVK 706
Db 657 TGKSVIVIKDAEVTGGFYGNANEMGGSTHNTDSDKASVVFGRKQREVK 706

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Db 653 TGKSIKIDANVTGGFYGNANEMGGSFTHNADDSKASVVFGRKQBEVK 702

RESULT 3

US-08-778-5708-11
; Sequence/11, Application US/097785708
; Patent No. 6437096
; GENERAL INFORMATION:
; APPLICANT: Myers, Lisa E
; APPLICANT: Schryvers, Anthony B
; APPLICANT: Harkness, Robin E
; APPLICANT: Loosmore, Sheena M.
; APPLICANT: Du, Run-Pan
; APPLICANT: Yang, Yan-Ping
; APPLICANT: Klein, Michel H
; TITLE OF INVENTION: Transferrin Receptor Genes of Moraxella
; NUMBER OF SEQUENCES: 43
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Sim & McBurney
; STREET: 6th Floor, 330 University Avenue
; CITY: Toronto
; STATE: Ontario
; COUNTRY: Canada
; ZIP: M5G 1R7
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patent In Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/778,5708
; FILING DATE: 03-JAN-1997
; CLASSIFICATION: 536
; ATTORNEY/AGENT INFORMATION:
; NAME: Stewart, Michael I
; REGISTRATION NUMBER: 24973
; REFERENCE/DOCKET NUMBER: 1038-664
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (416) 595-1155
; TELEFAX: (416) 595-1163
; INFORMATION FOR SEQ ID NO: 11:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 702 amino acids
; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear

US-08-778-5708-11

Query Match 86.8%; Score 3204; DB 4; Length 702;
Best Local Similarity 87.2%; Pred. No. 2.8e-210; Mismatches 40; Indels 12; Gaps 5;
Matches 619; Conservative 59;
Query 1 MKHPLTLCVAISAVLLTACGGSGSNPPAPTPIPNASGSGNTGNTAGGDTNTANAG 60
Db 1 MKHPLTLCVAISAVLLTACGGSGSNPPAPTPIPNASGSGNTGNTAGGDTNTANAG 60
Query 61 NTGTSNSTGANTPEPKYQDVPTDENKDEVSIGIQEPAMGYGMAISKQNLHKQDTPLD 120
Db 61 NTGTSNSTGANTPEPKYQDVPTDENKDEVSIGIQEPAMGYGMAISKQNLHKQDTPLD 120
Query 121 EKDIITLDGKQVAKGKSPFSLVDENKLLDGYIAKQNEADKNAIGDRIKDKOKSL 180
Db 121 EKDIITLDGKQVAKGKSPFSLVDENKLLDGYIAKQNEADKNAIGDRIKDKOKSL 180
Query 181 SKAELAKQIKEDVRKSHFQQVLSLKNKIFHSNDGTTKATRLQYVDYGYLVNCGNY 240
Db 179 SDEELAKQIKAVRSHFQQVLSLKNKIFHSNDGTTKATRLQYVDYGYLVNCGNY 238
Query 241 LTVKTDLWNLGPVGGVYNGTTTAKELPTQDAVKYKGHWDFMTDVAQRNRFSEVKENL 300
Db 239 LTVKTDLWNLGPVGGVYNGTTTAKELPTQDAVKYKGHWDFMTDVAQRNRFSEVKENL 298
Query 301 QAGRYGASSKDEYNRLITDEKNRPERYNGYHSSEFTVNFKDKKLTGELFSLNQDRHK 360

Db 299 QAGRYGASSKDEYNRLITDEKNRPERYNGYHSSEFTVNFKDKKLTGELFSLNQDRHK 358
Query 361 GNVTKTKRYDIDANIYGNRFRGSATASDKAEASTKHPFTSDAKNSLEGGFYGNABELA 420
Db 359 GNVTKTKRYDIDANIYGNRFRGSATASDKAEASTKHPFTSDAKNSLEGGFYGNABELA 416
Query 421 GKPLTNDKLVFGVGAARSKAGKTEAILDAYALGTFNKNAATFTPTTKQLDNFGNA 480
Db 417 GKPLTNDKLVFGVGAARSKAGKTEAILDAYALGTFNKNAATFTPTTKQLDNFGNA 476
Query 481 KKLVLGSTDVLDVPTGVTKDNEFTKNKPSATNKAAGETLMVNDKSVKTYGYGRNFEYL 540
Db 477 KKLVLGSTDVLDVPTGVTKDNEFTKNKPSATNKAAGETLMVNDKSVKTYGYGRNFEYL 532
Query 541 KFGELSVGTSNSVPLQERTATTGEEKAVPTKATKLYGNVWYITGKD----SKSPNEA 596
Db 533 KFGELSVGTSNSVPLQERTATTGEEKAVPTKATKLYGNVWYITGKD----SKSPNEA 592
Query 597 QDVADFDIDFEKKSVMGKLTTKORQDPVFNITGDIAGNWTGKASTTKADAGGYKIDSSS 656
Db 593 QDVADFDIDFEKKSVMGKLTTKORQDPVFNITGDIAGNWTGKASTTKADAGGYKIDSSS 652
Query 657 TGKSIKIDANVTGGFYGNANEMGGSFTHNADDSKASVVFGRKQBEVK 706
Db 653 TGKSIKIDANVTGGFYGNANEMGGSFTHNADDSKASVVFGRKQBEVK 702

RESULT 4

US-09-059-584-11
; Sequence 11, Application US/09059584
; Patent No. 6440701
; GENERAL INFORMATION:
; APPLICANT: Myers, Lisa E
; APPLICANT: Schryvers, Anthony B
; APPLICANT: Harkness, Robin E
; APPLICANT: Loosmore, Sheena M.
; APPLICANT: Du, Run-Pan
; APPLICANT: Yang, Yan-Ping
; APPLICANT: Klein, Michel H
; TITLE OF INVENTION: Transferrin Receptor Genes of Moraxella
; NUMBER OF SEQUENCES: 60
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Sim & McBurney
; STREET: 6th Floor, 330 University Avenue
; CITY: Toronto
; STATE: Ontario
; COUNTRY: Canada
; ZIP: M5G 1R7
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patent In Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/09/059,584
; FILING DATE: 14-APR-1998
; CLASSIFICATION:
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/778,570
; FILING DATE: 03-JAN-1997
; CLASSIFICATION:
; ATTORNEY/AGENT INFORMATION:
; NAME: Stewart, Michael I
; REGISTRATION NUMBER: 24973
; REFERENCE/DOCKET NUMBER: 1038-794
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (416) 595-1155
; TELEFAX: (416) 595-1163
; INFORMATION FOR SEQ ID NO: 11:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 702 amino acids
; TYPE: amino acid

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; STRANDEDNESS: single
; TOPOLOGY: linear
US-09-059-584-11

Query Match      86.8%; Score 3204; DB 4; Length 702;
Best Local Similarity 87.2%; Pred. No. 2.8e-210;
Matches 619; Conservative 39; Mismatches 40; Indels 12; Gaps 5;

Qy 1 MKHIPLTLLCAVSAVLLTACGGSGGSPAPPTPIPNASGSGNTGNTGNAGGDTNTANAG 60
Db 1 MKHIPLTLLCAVSAVLLTACGGSGGSPAPPTPIPNASGSGNTGNTGNAGGDTNTANAG 60

Qy 61 NTGTSNGTSGANTPEPKYQDVPTDENKDVSGIOEPAMGYGMAKSLKMLHQQDTPLD 120
Db 61 NTGTSNGTSGANTPEPKYQDVPTDENKDVSGIOEPAMGYGMAKSLKMLHQQDTPLD 120

Qy 121 EKDIITLDGKQVAKGSEKSPFSLDVENKLLDGYIAKMEADKNAIGDRIKDKNDKSL 180
Db 121 EKNIITLDGKQVAKGSEKSPFSLDVENKLLDGYIAKMEADKNAIGDRIKDKNDKSL 180

Qy 181 SKAELAKQIKEDVRKSHFQOVLSSLNKIFHSDNGTTKATTRDLQVYDYGYYLVNDGNY 240
Db 179 SDEELAKQIKAVKRSHEFQOVLSSLENKIFHSDNGTTKATTRDLQVYDYGYYLVNDGNY 238

Qy 241 LTVKTDLMNLGPVGGVYNGTTTAKELPTQDAVKYKGHWDFMTDVAQKRNRFSEVKENL 300
Db 239 LTVKTDLMNLGPVGGVYNGTTTAKELPTQDAVKYKGHWDFMTDVAQKRNRFSEVKENS 298

Qy 301 QAGRYYGASSKDEYNRLTDEKNKPERYNGEYGHSSSEFTVNFKDKKLTGELFSLQDSRK 360
Db 299 QAGRYYGASSKDEYNRLTDEKNKPERYNGEYGHSSSEFTVNFKDKKLTGELFSLQDRHK 358

Qy 361 GNVTKRYDIDANIYGNRFRGSATSDKAESKTKHPFTSDAKNSLEGFGYGNABELA 420
Db 359 GNVTKRYDIDANIYGNRFRGSATSDKAESKTKHPFTSDAKNSLEGFGYGNABELA 416

Qy 421 GKFLTNDNKLFGVFGAKRESKAGEKTEAILDAYALGTFNKNNAATFTPTFKQLDNFGNA 480
Db 417 GKFLTNDNKLFGVFGAKRESKAGEKTEAILDAYALGTFNKNNAATFTPTFKQLDNFGNA 476

Qy 481 KKLVLGSTVIDLVPVTGKVDNEFTKNKPDATNKAETLTMVNDKVSVKYGYGRNFEYL 540
Db 477 KKLVLGSTVIDLVPVTGKVDNEFTKNKPDATNKAETLTMVNDKVSVKYGYGRNFEYL 532

Qy 541 KFGELSVGTSNPFLOQERTATTGKAVPTKGTAKYLGWVGYITGKD----SSKSFNEA 596
Db 533 KFGELSVGTSNPFLOQERTATTGKAVPTKGTAKYLGWVGYITGKDGTGTGKSFDA 592

Qy 597 QDVADFDIDFKSVYKGLITKGRQDPVFSITGQIAGNGWTGKASTTKADAGGYKIDSSS 656
Db 593 QDVADFDIDFKSVYKGLITKGRQDPVFSITGQIAGNGWTGKASTTKADAGGYKIDSSS 652

Qy 657 TGSIVIKDABVTGGFYGPANEMGGSTHNTDSDKASVVPKTRQBEVK 706
Db 653 TGSIVIKDANVTGGFYGPANEMGGSTHNTDSDKASVVPKTRQBEVK 702

RESULT 5
US-08-867-941-25
; Sequence 25, Application US/08867941
; Patent No. 5977337
; GENERAL INFORMATION:
; APPLICANT: Loosmore, Sheena M
; APPLICANT: Du, Run-Pan
; APPLICANT: Wang, Quijun
; APPLICANT: Yang, Yan-Ping
; APPLICANT: Klein, Michel H
; TITLE OF INVENTION: LACTOPERRIN RECEPTOR GENES OF MORAXELLA
; NUMBER OF SEQUENCES: 67
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Sim & McBurney
; STREET: 6th Floor, 330 University Avenue
; CITY: Toronto
```

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; STATE: Ontario
; COUNTRY: Canada
; ZIP: M5G 1R7
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/867,941
; FILING DATE: 03-JUN-1997
; CLASSIFICATION: 435
; ATTORNEY/AGENT INFORMATION:
; NAME: Stewart, Michael I
; REGISTRATION NUMBER: 24,973
; REFERENCE/DOCKET NUMBER: 1038-681 MTS:jb
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (416) 595-1155
; TELEFAX: (416) 595-1163
; INFORMATION FOR SEQ ID NO: 25:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 702 amino acids
; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear
US-08-867-941-25

Query Match      86.7%; Score 3200; DB 2; Length 702;
Best Local Similarity 87.0%; Pred. No. 5.2e-210;
Matches 618; Conservative 39; Mismatches 41; Indels 12; Gaps 5;

Qy 1 MKHIPLTLLCAVSAVLLTACGGSGGSPAPPTPIPNASGSGNTGNTGNAGGDTNTANAG 60
Db 1 MKHIPLTLLCAVSAVLLTACGGSGGSPAPPTPIPNASGSGNTGNTGNAGGDTNTANAG 60

Qy 61 NTGTSNGTSGANTPEPKYQDVPTDENKDVSGIOEPAMGYGMAKSLKMLHQQDTPLD 120
Db 61 NTGTSNGTSGANTPEPKYQDVPTDENKDVSGIOEPAMGYGMAKSLKMLHQQDTPLD 120

Qy 121 EKDIITLDGKQVAKGSEKSPFSLDVENKLLDGYIAKMEADKNAIGDRIKDKNDKSL 180
Db 121 EKNIITLDGKQVAKGSEKSPFSLDVENKLLDGYIAKMEADKNAIGDRIKDKNDKSL 180

Qy 181 SKAELAKQIKEDVRKSHFQOVLSSLNKIFHSDNGTTKATTRDLQVYDYGYYLVNDGNY 240
Db 179 SDEELAKQIKAVKRSHEFQOVLSSLENKIFHSDNGTTKATTRDLQVYDYGYYLVNDGNY 238

Qy 241 LTVKTDLMNLGPVGGVYNGTTTAKELPTQDAVKYKGHWDFMTDVAQKRNRFSEVKENL 300
Db 239 LTVKTDLMNLGPVGGVYNGTTTAKELPTQDAVKYKGHWDFMTDVAQKRNRFSEVKENS 298

Qy 301 QAGRYYGASSKDEYNRLTDEKNKPERYNGEYGHSSSEFTVNFKDKKLTGELFSLQDSRK 360
Db 299 QAGRYYGASSKDEYNRLTDEKNKPERYNGEYGHSSSEFTVNFKDKKLTGELFSLQDRHK 358

Qy 361 GNVTKRYDIDANIYGNRFRGSATSDKAESKTKHPFTSDAKNSLEGFGYGNABELA 420
Db 359 GNVTKRYDIDANIYGNRFRGSATSDKAESKTKHPFTSDAKNSLEGFGYGNABELA 416

Qy 421 GKFLTNDNKLFGVFGAKRESKAGEKTEAILDAYALGTFNKNNAATFTPTFKQLDNFGNA 480
Db 417 GKFLTNDNKLFGVFGAKRESKAGEKTEAILDAYALGTFNKNNAATFTPTFKQLDNFGNA 476

Qy 481 KKLVLGSTVIDLVPVTGKVDNEFTKNKPDATNKAETLTMVNDKVSVKYGYGRNFEYL 540
Db 477 KKLVLGSTVIDLVPVTGKVDNEFTKNKPDATNKAETLTMVNDKVSVKYGYGRNFEYL 532

Qy 541 KFGELSVGTSNPFLOQERTATTGKAVPTKGTAKYLGWVGYITGKD----SSKSFNEA 596
Db 533 KFGELSVGTSNPFLOQERTATTGKAVPTKGTAKYLGWVGYITGKDGTGTGKSFDA 592

Qy 597 QDVADFDIDFKSVYKGLITKGRQDPVFSITGQIAGNGWTGKASTTKADAGGYKIDSSS 656
Db 593 QDVADFDIDFKSVYKGLITKGRQDPVFSITGQIAGNGWTGKASTTKADAGGYKIDSSS 652
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Db 593 QDVADFDIDFCNKSXGKLIITKGRQDPVFSITGQIAGNGWTGTASTTKADAGYKIDSSS 652

Qy 657 TGKSIIVIKDAEVTGFGYGPANENMGSGSTHTNDSDSKASVFGTKRQBEVK 706

Db 653 TGKSIADKANVTGGFYGPANENMGSGSTHTNADDSKASVFGTKRQBEVK 702

RESULT 6

US-09-074-658-25

; Sequence 25, Application US/09074658

; Patent No. 6184371

; GENERAL INFORMATION:

; APPLICANT: Loosmore, Sheena M

; APPLICANT: Run-Pan Du

; APPLICANT: Quijun Wang

; APPLICANT: Yang, Yan-Ping

; APPLICANT: Klein, Michel H

; TITLE OF INVENTION: LACTOFERRIN RECEPTOR GENES OF MORAXELLA

; NUMBER OF SEQUENCES: 78

; CORRESPONDENCE ADDRESS:

; ADDRESSEE: Sim & McBurney

; STREET: 6th Floor, 330 University Avenue

; CITY: Toronto

; STATE: Ontario

; COUNTRY: Canada

; ZIP: M5G 1R7

; COMPUTER READABLE FORM:

; MEDIUM TYPE: Floppy disk

; COMPUTER: IBM PC compatible

; OPERATING SYSTEM: PC-DOS/MS-DOS

; SOFTWARE: PatentIn Release #1.0, Version #1.30

; CURRENT APPLICATION DATA:

; APPLICATION NUMBER: US/09/074,658

; FILING DATE: 08-MAY-1998

; CLASSIFICATION: 435

; ATTORNEY/AGENT INFORMATION:

; NAME: Stewart, Michael I

; REGISTRATION NUMBER: 24,973

; REFERENCE/DOCKET NUMBER: 1038-795

; TELECOMMUNICATION INFORMATION:

; TELEPHONE: (416) 595-1155

; TELEFAX: (416) 595-1163

; INFORMATION FOR SEQ ID NO: 25:

; SEQUENCE CHARACTERISTICS:

; LENGTH: 702 amino acids

; TYPE: amino acid

; STRANDEDNESS: single

; TOPOLOGY: linear

US-09-074-658-25

Query Match 86.7%; Score 3200; DB 3; Length 702;

Best Local Similarity 87.0%; Pred. No. 5.2e-210;

Matches 618; Conservative 39; Mismatches 41; Indels 12; Gaps 5;

Qy 1 MKHPLTLCVAISAVLLTACGGGNNPPAPTIPNAGSGNTGNTGAGGTNTANAG 60

Db 1 MKHPLTLCVAISAVLLTACGGGNNPPAPTIPNAGSGNTGNTGAGGTNTANAG 60

Qy 61 NTGTNSGTSGANTPEPKYQDVPTDENKDKVSGIQEPAMGYGMALSKMNLHKQDTPLD 120

Db 61 NTGTNSGTSGANTPEPKYQDVPTENKDKVSGIQEPAMGYGMALSKMNLHKQDTPLD 120

Qy 121 EKDITLDGKQVAKGEKSPPLFSLDVENKLLDGYIAKMNBAIDKNAIGDRIKDKDKSL 180

Db 121 EKNITLDGKQVAKGEKSPPLFSLDVENKLLDGYIAKMNBAIDKNAIGDRIKDKKE - I 178

Qy 181 SKAELAKQIKEDVRKSHFQQVLSLKNKIIFHSNDGTTKATRDLOVYDGYLVNNGNY 240

Db 179 SDEELAKQIKEDVRKSHFQQVLSLKNKIIFHSNDGTTKATRDLOVYDGYLVNNGNY 238

Qy 241 LTVKTDLWNLGPPVGGVYFNGTTAKELPTODAVKYKGWDFMTDVAKORNFSEVKENL 300

Db 239 LTVKTDLWNLGPPVGGVYFNGTTAKELPTODAVKYKGWDFMTDVAKORNFSEVKENS 298

RESULT 7

US-08-613-009A-10

; Sequence 10, Application US/08613009A

; Patent No. 6090576

; GENERAL INFORMATION:

; APPLICANT: Myers, Lisa E

; APPLICANT: Schryvers, Anthony B

; APPLICANT: Harkness, Robin E

; APPLICANT: Loosmore, Sheena M

; APPLICANT: Du, Run-Pan

; APPLICANT: Yang, Yan-Ping

; APPLICANT: Klein, Michel H

; TITLE OF INVENTION: Transferrin Receptor Genes of Moraxella

; NUMBER OF SEQUENCES: 31

; CORRESPONDENCE ADDRESS:

; ADDRESSEE: Sim & McBurney

; STREET: 6th Floor, 330 University Avenue

; CITY: Toronto

; STATE: Ontario

; COUNTRY: Canada

; ZIP: M5G 1R7

; COMPUTER READABLE FORM:

; MEDIUM TYPE: Floppy disk

; COMPUTER: IBM PC compatible

; OPERATING SYSTEM: PC-DOS/MS-DOS

; SOFTWARE: PatentIn Release #1.0, Version #1.30

; CURRENT APPLICATION DATA:

; APPLICATION NUMBER: US/08/613,009A

; FILING DATE: 08-MAR-1996

; CLASSIFICATION: 435

; ATTORNEY/AGENT INFORMATION:

; NAME: Stewart, Michael I

; REGISTRATION NUMBER: 24973

; REFERENCE/DOCKET NUMBER: 1038-542

; TELECOMMUNICATION INFORMATION:

; TELEPHONE: (416) 595-1155

; TELEFAX: (416) 595-1163

; INFORMATION FOR SEQ ID NO: 10:

; SEQUENCE CHARACTERISTICS:

; LENGTH: 682 amino acids

; TYPE: amino acid

; STRANDEDNESS: single

; TOPOLOGY: linear

US-08-613-009A-10

Query Match 84.2%; Score 3107; DB 3; Length 682;
Best Local Similarity 86.8%; Pred. No. 1.1e-203; Indels 12; Gaps 5;
Matches 599; Conservative 39; Mismatches 40; Indels 12; Gaps 5;
Qy 21 CGSGGSGNPAPPTIPNAGSGSGNTGNTAGGTTDNTANAGTGTGTSANTPEPKYK 80
Db 1 CGSGGSGNPAPPTIPNAGSGSGNTGNTAGGTTDNTANAGTGTGTSANTPEPKYQ 60
Qy 81 DVPTDENKDEVSIGIQEPAMGYGMAISKNLHKQDTPDLDEKDIITLDGKKQVAKGKSP 140
Db 61 DVPTKEKEDKVSSIQEPAMGYGMAISKNLHNRQDTPDLDEKNIITLDGKKQVAKGKSP 120
Qy 141 LPFSLDVENKLLDGYIAKNEADKNAIGDRFKDKNDKSKLSKAEALAKQIKEDVKRSHEFQ 200
Db 121 LPFSLDVENKLLDGYIAKNNVADKNAIGDRFKKGNKE--ISDEELAKQIKAEVRKSHFQ 178
Qy 201 QVLSLKNKIFHSGNDGTTKATTRDLQVYDGYLVNDGNYLTVKTDLWNLGPVGVFYN 260
Db 179 QVLSLKNKIFHSGNDGTTKATTRDLKVDYGYVLANDGNYLTVKTDKLNWLPVGVFYN 238
Qy 261 GTTTAKELPTQDAVKYKGHWDFMTDVAKQRNRFSEVKENIQAQRYYGASSKDEYNRLITD 320
Db 239 GTTTAKELPTQDAVKYKGHWDFMTDVANRRNRFSEVKENSQAQWYYGASSKDEYNRLITK 298
Qy 321 EKNKPERYNGEYGHSSSEFTVNFVKDKLTGELFSLNLDQRHKGNTKRYDIDANIYGNRF 380
Db 299 EDSAPDGHSGEYGHSSSEFTVNFKEKKUTGKLFSLNLDQRHKGNTKRYDIDANIYGNRF 358
Qy 381 RGSATASDKAEASKTHPFTSDAKNSLEGGFYGNABELAGKFLTNKDLFGVFGAKRES 440
Db 359 RGSATASNKNDTS--KHPFTSDANNRLEGGFYGPKGEBELAGKFLTNKDLFGVFGAKRES 416
Qy 441 KAGEKTEAILDAYALGTFFNKNNAFTTPTFKQDLNFGNAKKVLGSTVIDLVTGVTKD 500
Db 417 KAEKTEAILDAYALGTFFNTSNATFTTPTFEKQDLNFGNAKKVLGSTVIDLVTDATK- 475
Qy 501 VNEFTKPKDSATNKAGETLMVNDKVSVKTYGYGRNFEYLLKFGELSVGTSNSVFLQERT 560
Db 476 -NEFTKPKDSATNEAGETLMVNDSEVSKT--YGNFEYLLKFGELSVGTSNSVFLQERT 532
Qy 561 ATTGEKAVPTGTAKYLGNNWGYITGKD---SSKSFNEAQDVADFDIDPEKKSVMGKLT 616
Db 533 ATTGEKAVPTGTAKYLGNNWGYITGKDTGTGCTKSFDAQDVADFDIDFGNKSVMGKLI 592
Qy 617 TKDRQDPVFNITGDIAGNWTGKASTTKADAGGYKIDSSSTGKSIIVKDAEVTGGFYGPN 676
Db 593 TKGRQDPVFSITGQIAGNWTGTASTTKADAGGYKIDSSSTGKSIIVKIDANVTGGFYGPN 652
Qy 677 ANEMGGSFTHNTDSDKASVVFGRKQREVK 706
Db 653 ANEMGGSFTHNADSDKASVVFGRKQREVK 682

RESULT 8

US-08-778-570B-12
; Sequence 12, Application US/08778570B
; Patent No. 6437096
; GENERAL INFORMATION:
; APPLICANT: Myers, Lisa E
; APPLICANT: Schryvers, Anthony B
; APPLICANT: Harkness, Robin E
; APPLICANT: Loosmore, Sheena M.
; APPLICANT: Du, Run-Pan
; APPLICANT: Yang, Yan-Ping
; APPLICANT: Klein, Michel H
; TITLE OF INVENTION: Transferrin Receptor Genes of Moraxella
; NUMBER OF SEQUENCES: 43
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Sim & McBurney
; STREET: 6th Floor, 330 University Avenue
; CITY: Toronto

STATE: Ontario
COUNTRY: Canada
ZIP: M5G 1R7
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/778,570B
FILING DATE: 03-JAN-1997
CLASSIFICATION: 536
ATTORNEY/AGENT INFORMATION:
NAME: Stewart, Michael I
REGISTRATION NUMBER: 24973
REFERENCE/DOCKET NUMBER: 1038-664
TELECOMMUNICATION INFORMATION:
TELEPHONE: (416) 595-1155
TELEFAX: (416) 595-1163
INFORMATION FOR SEQ ID NO: 12:
SEQUENCE CHARACTERISTICS:
LENGTH: 682 amino acids
TYPE: amino acid
STRANDEDNESS: single
TOPOLOGY: linear
US-08-778-570B-12
Query Match 84.2%; Score 3107; DB 4; Length 682;
Best Local Similarity 86.8%; Pred. No. 1.1e-203; Indels 12; Gaps 5;
Matches 599; Conservative 39; Mismatches 40; Indels 12; Gaps 5;
Qy 21 CGSGGSGNPAPPTIPNAGSGSGNTGNTAGGTTDNTANAGTGTGTSANTPEPKYK 80
Db 1 CGSGGSGNPAPPTIPNAGSGSGNTGNTAGGTTDNTANAGTGTGTSANTPEPKYQ 60
Qy 81 DVPTDENKDEVSIGIQEPAMGYGMAISKNLHKQDTPDLDEKDIITLDGKKQVAKGKSP 140
Db 61 DVPTKEKEDKVSSIQEPAMGYGMAISKNLHNRQDTPDLDEKNIITLDGKKQVAKGKSP 120
Qy 141 LPFSLDVENKLLDGYIAKNEADKNAIGDRFKDKNDKSKLSKAEALAKQIKEDVKRSHEFQ 200
Db 121 LPFSLDVENKLLDGYIAKNNVADKNAIGDRFKKGNKE--ISDEELAKQIKAEVRKSHFQ 178
Qy 201 QVLSLKNKIFHSGNDGTTKATTRDLQVYDGYLVNDGNYLTVKTDLWNLGPVGVFYN 260
Db 179 QVLSLKNKIFHSGNDGTTKATTRDLKVDYGYVLANDGNYLTVKTDKLNWLPVGVFYN 238
Qy 261 GTTTAKELPTQDAVKYKGHWDFMTDVAKQRNRFSEVKENIQAQRYYGASSKDEYNRLITD 320
Db 239 GTTTAKELPTQDAVKYKGHWDFMTDVANRRNRFSEVKENSQAQWYYGASSKDEYNRLITK 298
Qy 321 EKNKPERYNGEYGHSSSEFTVNFVKDKLTGELFSLNLDQRHKGNTKRYDIDANIYGNRF 380
Db 299 EDSAPDGHSGEYGHSSSEFTVNFKEKKUTGKLFSLNLDQRHKGNTKRYDIDANIYGNRF 358
Qy 381 RGSATASDKAEASKTHPFTSDAKNSLEGGFYGNABELAGKFLTNKDLFGVFGAKRES 440
Db 359 RGSATASNKNDTS--KHPFTSDANNRLEGGFYGPKGEBELAGKFLTNKDLFGVFGAKRES 416
Qy 441 KAGEKTEAILDAYALGTFFNKNNAFTTPTFKQDLNFGNAKKVLGSTVIDLVTGVTKD 500
Db 417 KAEKTEAILDAYALGTFFNTSNATFTTPTFEKQDLNFGNAKKVLGSTVIDLVTDATK- 475
Qy 501 VNEFTKPKDSATNKAGETLMVNDKVSVKTYGYGRNFEYLLKFGELSVGTSNSVFLQERT 560
Db 476 -NEFTKPKDSATNEAGETLMVNDSEVSKT--YGNFEYLLKFGELSVGTSNSVFLQERT 532
Qy 561 ATTGEKAVPTGTAKYLGNNWGYITGKD---SSKSFNEAQDVADFDIDPEKKSVMGKLT 616
Db 533 ATTGEKAVPTGTAKYLGNNWGYITGKDTGTGCTKSFDAQDVADFDIDFGNKSVMGKLI 592
Qy 617 TKDRQDPVFNITGDIAGNWTGKASTTKADAGGYKIDSSSTGKSIIVKDAEVTGGFYGPN 676
Db 593 TKGRQDPVFSITGQIAGNWTGTASTTKADAGGYKIDSSSTGKSIIVKIDANVTGGFYGPN 652
Qy 677 ANEMGGSFTHNTDSDKASVVFGRKQREVK 706
Db 653 ANEMGGSFTHNADSDKASVVFGRKQREVK 682

Db 593 TKGRQDPVFSITQIAGNGWTGATTTKADAGGYKIDSSSTGKSIVIKDANVTGGFYGPN 652

Qy 677 ANEMGSGSTHNTDDSKASVFGTKRQBEVK 706

Db 653 ANEMGSGSTHNTDDSKASVFGTKRQBEVK 682

RESULT 9

US-09-059-584-12

; Sequence 12, Application US/09059584

; Patent No. 6440701

; GENERAL INFORMATION:

; APPLICANT: Myers, Lisa E

; APPLICANT: Schryvers, Anthony B

; APPLICANT: Harkness, Robin E

; APPLICANT: Loosmore, Sheena M.

; APPLICANT: Du, Run-Pan

; APPLICANT: Yang, Yan-Ping

; APPLICANT: Klein, Michel H

; TITLE OF INVENTION: Transferrin Receptor Genes of Moraxella

; NUMBER OF SEQUENCES: 60

; CORRESPONDENCE ADDRESS:

; ADDRESSEE: Sim & McBurney

; STREET: 6th Floor, 330 University Avenue

; CITY: Toronto

; STATE: Ontario

; COUNTRY: Canada

; ZIP: M5G 1R7

; COMPUTER READABLE FORM:

; MEDIUM TYPE: Floppy disk

; COMPUTER: IBM PC compatible

; OPERATING SYSTEM: PC-DOS/MS-DOS

; SOFTWARE: Patent in Release #1.0, Version #1.30

; CURRENT APPLICATION DATA:

; APPLICATION NUMBER: US/09/059,584

; FILING DATE: 14-APR-1998

; CLASSIFICATION:

; PRIOR APPLICATION DATA:

; APPLICATION NUMBER: US 08/778,570

; FILING DATE: 03-JAN-1997

; CLASSIFICATION:

; ATTORNEY/AGENT INFORMATION:

; NAME: Stewart, Michael I

; REGISTRATION NUMBER: 24973

; REFERENCE/DOCKET NUMBER: 1038-794

; TELECOMMUNICATION INFORMATION:

; TELEPHONE: (416) 595-1155

; TELEFAX: (416) 595-1163

; INFORMATION FOR SEQ ID NO: 12:

; SEQUENCE CHARACTERISTICS:

; LENGTH: 682 amino acids

; TYPE: amino acid

; STRANDEDNESS: single

; TOPOLOGY: linear

US-09-059-584-12

Query Match 84.2%; Score 3107; DB 4; Length 682;

Best Local Similarity 86.8%; Pred. No. 1.1e-203;

Matches 599; Conservative 39; Mismatches 40; Indels 12; Gaps 5;

Qy 21 CGSGSGSNPPAPTIPNAGSGNTGNTAGTONTANAGTGTNSGTSGANTPEPKYK 80

Db 1 CGSGSGSNPPAPTIPNAGSGNTGNTAGTONTANAGTGTNSGTSGANTPEPKYK 60

Qy 81 DVPTDENKKBVSGIQEAPMGYGNALSKMNLHKQDTPLDKDIITLDGKKQVAKGKSP 140

Db 61 DVPTKEKKBVSGIQEAPMGYGNALSKMNLHKQDTPLDKDIITLDGKKQVAKGKSP 120

Qy 141 LPFSLDENKLLDGYIAKMNENADNAIGDRIKDNFKDKSLKAEKQIKEDVRKSHFQ 200

Db 121 LPFSLDENKLLDGYIAKMNENADNAIGDRIKDKGKKE--ISDEELAKQIKAEVRKSHFQ 178

Qy 201 QVLSLKNKIFHSNDGTTKATTRLQVVDYGYLVNDGNVLTVTDKLWNLGPPGVGFPYN 260

Db 179 QVLSLKNKIFHSNDGTTKATTRLQVVDYGYLVNDGNVLTVTDKLWNLGPPGVGFPYN 238

Qy 261 GTTTAKELPTQDAVKYKGHMDPMTDVAKGRNRFSEVKENLQAGRYYGASSKDEYNRLTD 320

Db 239 GTTTAKELPTQDAVKYKGHMDPMTDVANRRNRFSEVKENLQAGRYYGASSKDEYNRLTD 298

Qy 321 EKXKPERYNGEYGHSSSEFTVNFKDKLGTGELFSLNQLDSRKGNVTYKRYDIDANIYGNRP 380

Db 299 EDSAPDGHSGEYGHSSSEFTVNFKEKLTGKLFSLNQLDRHKGNTYKTRYDIDANIHGNNR 358

Qy 381 RGSATASDKAEASKTKHPFTSDAKNSLEGGFYGNABELAGKPLTNDKLFVFGAKRES 440

Db 359 RGSATASNKNDTS--KHPFTSDANNRLEGGFYGPKGELAGKPLTNDKLFVFGAKRES 416

Qy 441 KAGEKTEAILDAYALGTGTFNKNNAFTTFTTKQQLDNFGNAKCLVLGSTVIDLVPTGVTKD 500

Db 417 KABEKTEAILDAYALGTGTFNKNNAFTTFTTKQQLDNFGNAKCLVLGSTVIDLVPTDATK- 475

Qy 501 VNEFTKPKDSATNKAGETLMVNDKVSVKTYGYGRNFEYIKFGBLSVGTNSVFLQGBERT 560

Db 476 -NEFTKDKPSATNEAGETLMVNDKVSVKTYGYGRNFEYIKFGBLSVGTNSVFLQGBERT 532

Qy 561 ATTGEKAVPTKGTAKYLGNNVGYITGKD---SSKSFNEAODVADFDIDFEKKSVKGLT 616

Db 533 ATTGEKAVPTKGTAKYLGNNVGYITGKTGTGKSFDAQDADFDIDFGNKSVSGLI 592

Qy 617 TKDRQDPVFNITGDIAGNGWTGKASTTKADAGGYKIDSSSTGKSIVIKDAEVTGGFYGPN 676

Db 593 TKGRQDPVFSITQIAGNGWTGATTTKADAGGYKIDSSSTGKSIVIKDANVTGGFYGPN 652

Qy 677 ANEMGSGSTHNTDDSKASVFGTKRQBEVK 706

Db 653 ANEMGSGSTHNTDDSKASVFGTKRQBEVK 682

RESULT 10

US-09-059-584-49

; Sequence 49, Application US/09059584

; Patent No. 6440701

; GENERAL INFORMATION:

; APPLICANT: Myers, Lisa E

; APPLICANT: Schryvers, Anthony B

; APPLICANT: Harkness, Robin E

; APPLICANT: Loosmore, Sheena M.

; APPLICANT: Du, Run-Pan

; APPLICANT: Yang, Yan-Ping

; APPLICANT: Klein, Michel H

; TITLE OF INVENTION: Transferrin Receptor Genes of Moraxella

; NUMBER OF SEQUENCES: 60

; CORRESPONDENCE ADDRESS:

; ADDRESSEE: Sim & McBurney

; STREET: 6th Floor, 330 University Avenue

; CITY: Toronto

; STATE: Ontario

; COUNTRY: Canada

; ZIP: M5G 1R7

; COMPUTER READABLE FORM:

; MEDIUM TYPE: Floppy disk

; OPERATING SYSTEM: PC-DOS/MS-DOS

; SOFTWARE: Patent in Release #1.0, Version #1.30

; CURRENT APPLICATION DATA:

; APPLICATION NUMBER: US/09/059,584

; FILING DATE: 14-APR-1998

; CLASSIFICATION:

; PRIOR APPLICATION DATA:

; APPLICATION NUMBER: US 08/778,570

; FILING DATE: 03-JAN-1997

; CLASSIFICATION:

; ATTORNEY/AGENT INFORMATION:

; NAME: Stewart, Michael I

; REGISTRATION NUMBER: 24973

; REFERENCE/DOCKET NUMBER: 1038-794

; TELECOMMUNICATION INFORMATION:

; TELEPHONE: (416) 595-1155

; TELEFAX: (416) 595-1163

; INFORMATION FOR SEQ ID NO: 12:

; SEQUENCE CHARACTERISTICS:

; LENGTH: 682 amino acids

; TYPE: amino acid

; STRANDEDNESS: single

; TOPOLOGY: linear

US-09-059-584-12

```
; REFERENCE/DOCKET NUMBER: 1038-794
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (416) 595-1155
; TELEFAX: (416) 595-1163
; INFORMATION FOR SEQ ID NO: 49:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 713 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; US-09-059-584-49

Query Match      81.5%; Score 3009; DB 4; Length 713;
Best Local Similarity 82.7%; Pred. No. 5.6e-197;
Matches 591; Conservative 47; Mismatches 61; Indels 16; Gaps 8;

Qy 1 MKHPLTLTLCVAISAVLLTACGGSGGNPPAPTPIPNASGSGNTGNTGNAGTDTNANAG 60
Db 1 MKHPLTLTLCVAISAVLLTACGGSGGNPPAPTPIPNASGSGNTGNTGNAGTDTNANAG 60

Qy 61 NTGTSNTSGTSANTPEPKYKDVPTDENKDKDVSGIQBPAMGYGMALSKMNLHKQDDTPLD 120
Db 61 NTGTSNTSGTSANTPEPKYKDVPTDENKDKDVSGIQBPAMGYGMALSKMNLHKQDDTPLD 120

Qy 121 EKOIITLDGKQVAKGSKSPFPFLSDVENKLLDGYIAKMNADKVAIGDRICKDN-KDKS 179
Db 121 AKNIITLDGKQVADNQSKPLPFLSDVENKLLDGYIAKMNADKVAIGERIKRENEQNK 180

Qy 180 LSKAELAKQIKEDYRKSHKFOVLSSLNKFIHSDNGTTKATTRDLOVVDYGYLVNDGN 239
Db 181 ISBELAKKIKENVRKSPKFOVLSSIRAKTFHSDNKTTKATTRDLYVDYGYLVNDAN 240

Qy 240 YLTVKTD--ELMNLPGVGVYNGTAKELPTQDAVKYKGHWDFMTDVAQRNRFSEVK 297
Db 241 YLTVKTDKPKLWNSGVGVYNGTAKELPTQDAVKYKGHWDFMTDVAQRNRFSEVK 300

Qy 298 ENLAQRYYGASSKDEYNRLTDEKNKPERVNGYHSSSEPTVNFKDKLTGELFSLQD 357
Db 301 EYQAGWMYGASSKDEYNRLTAKADAAPDNYSGYHSSSEPTVNFKEKLTGELFSLQD 360

Qy 358 SRKGNVTKRYDIDANLYGNRFRGSATASDKASKTKHPPTSDAKNSLEGGYGNAE 417
Db 361 SHKQVTKRYDIDKADHGNRFRGSATATDKASDKSKHPPTSHAKDKLEGGYGPKE 420

Qy 418 ELACKFLTNDKFLGVFGAKRESKAGEKTEAILDAYALGTFPKNNAT--TFPTPKKOLD 475
Db 421 ELACKFLTDDNKLFGVFGAKQEGNV-EKTEAILDAYALGTFPKGCTTNPAFTANSKELD 479

Qy 476 NFGNAKKLVLGSTVIDLVPTGVTKDVNEFTKNKPDPSATNKAGETLMVNDKVSVKTYGYR 535
Db 480 NFGNAKKLVLGSTVIDLVPTDATKDVNEF-KEKPKSATNKAGETLMVNDVSVKTV--YKG 536

Qy 536 NFEYLKRGELSVGTSNSVLOGERTATTGKAVPTGKTAKYLGHWGVYITGKDS----- 590
Db 537 NFEYLKRGELSVGSHSVFVQGERATATGKAVPTTGKAKYLGHWGVYITGADSKGSTD 596

Qy 591 -KSFNEAQDVADFOIDPEKKSVMKGLTTKDRQDPVFNITGDIAGNGWTGKASTTKADAGG 649
Db 597 GKGTDAKDADFOIDPEKKSVMKGLTTKDRQDPVFNITGDIAGNGWTGKASTAEANAGG 656

Qy 650 YKIDSSSTGKSIVIKDAEVTGGFYPNANMGGSFTHTT-DDSKASVVVFGTKRQE 703
Db 657 YKIDSSSTGKSIVIKDAVVTGGFYPNATMGGSFTHTNSGNDGKVSVVFGTKRQE 711

RESULT 11
US-08-778-570B-15
; Sequence 15, Application US/08778570B
; Patent No. 6437096
; GENERAL INFORMATION:
; APPLICANT: Myers, Lisa E
; APPLICANT: Schryvers, Anthony B
; APPLICANT: Harkness, Robin E
; APPLICANT: Loosmore, Sheena M.
```

```
; APPLICANT: Du, Run-Pan
; APPLICANT: Yang, Yan-Ping
; APPLICANT: Klein, Michel H
; TITLE OF INVENTION: Transferrin Receptor Genes of Moraxella
; NUMBER OF SEQUENCES: 43
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Sim & McBurney
; STREET: 6th Floor, 330 University Avenue
; CITY: Toronto
; STATE: Ontario
; COUNTRY: Canada
; ZIP: M5G 1R7
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patentin Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; FILING DATE: 03-JAN-1997
; CLASSIFICATION: 536
; ATTORNEY/AGENT INFORMATION:
; NAME: Stewart, Michael I
; REGISTRATION NUMBER: 24973
; REFERENCE/DOCKET NUMBER: 1038-664
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (416) 595-1155
; TELEFAX: (416) 595-1163
; INFORMATION FOR SEQ ID NO: 15:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 709 amino acids
; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; US-08-778-570B-15

Query Match      64.1%; Score 2365.5; DB 4; Length 709;
Best Local Similarity 67.0%; Pred. No. 4.3e-153;
Matches 495; Conservative 51; Mismatches 130; Indels 63; Gaps 15;

Qy 1 MKHPLTLTLCVAISAVLLTACGG--SGGSNPPAPTPIPNASGSGNTGNTGNAGT----DN 55
Db 1 MKHPLTLTLCVAISAVLLTACGGSSGGFNPPAPTPIPNAGNSGNAGNAGGTTGGANS 60

Qy 56 TANAGNTGNTSGTSANTPEPKYKDVPTDENKDKDVSGIQBPAMGYGMALSKMN--LH 112
Db 61 AGNAGGTGGANSAGSASTPEPKYKDVPTDENKDKDVSGIQBPAMGYGVELKLRNWIPOE 120

Qy 113 KQDTPIDEXDIITLDGKQVAKGSKSPFPFLSDV-ENKLLDGYIAKMNADKVAIGDRI 171
Db 121 QESHAKINTNDVVKLE-----GDLKHNPFDSIWQNIKNKSKEVQTVYNQEKQNIEDQI 173

Qy 172 KKONK-----DKSLSK-----AELAKQIKEDYRKSHKFOVLSSLNKFIHSD 213
Db 174 KRENKQRPDKLDDVALQVIEKVLDDRLTTELAKPIYE-----KN-INYS 217

Qy 214 NDGTTKATTRDLOVVDYGYLVNDGNVLTVKTDLNLNLPVGVGVYNGTTTAKELPTQDA 273
Db 218 HDQNKARTKDLKVRSGY--IYRSGYSNIIIPKIAKTGDFGALFYGTQAKQLPVSQ- 274

Qy 274 VKYKGHWDFMTDVAQRNRFSEVKENIQAGRYTGASSKDEYNRLTDEKNKPERYNGEYG 333
Db 275 VKYKGHWDFMTDAKKGQSPSSFGTSQRLAGDRYSAMSVHEYPSLLTDEKNKPDYNGEYG 334

Qy 334 HSSEFTVNFKDKLTGELFSLQDSRKGNVTKRYDIDANLYGNRFRGSATASDKAEAS 393
Db 335 HSSEFTVDFSKSLKSELNNIODGHKGSVNTKRYDIDANLYGNRFRGSATASDTTEAS 394

Qy 394 KTKHPPTSDAKNSLEGGYFPNABEELAGKFLTNDKLVGVFGAKRESKAGEKTEAILDAY 453
Db 395 KSKHPPTSDAKNSLEGGYFPNABEELAGKFLTNDKLVGVFGAKRESKAGEKTEAILDAY 454

Qy 454 ALGTFNKNAT--TFTPTTKQLDNFNGNAKKLVLGSTVIDLVPTGVTKDVNEFTKNKPD 511
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Db 455 ALGTFNKGTTNPAFTANSKELDNFGNAKLVLGSTVIDLVPTGATKDVNEF-KEKPKS 513
Qy 512 ATNKAETLMVNDKVSVKTYGYGRNFYLYKFGELSVGTSNVFLQGETATTGKAVPTK 571
Db 514 ATNKAETLMVNDKVSVKTYGYGRNFYLYKFGELSVGTSNVFLQGETATTGKAVPTK 570
Qy 572 GTAKYLGNNWGYITGKD-----SSKSFNEAQAQVADFDIDFEKSVKGLTTRKQDPPVNI 627
Db 571 GTAKYLGNNWGYITGKD-----SSKSFNEAQAQVADFDIDFEKSVKGLTTRKQDPPVNI 630
Qy 628 TGDIAAGNGWTGKASTTKADAGYKIDSSSTGKSIIVKDAEVTGGFYGNANEMGGSFTHN 687
Db 631 TGOIAGNGWTGTASTAKANVGGYKIDSSSTGKSIIVENAKVTGGFYGNANEMGGSFTHD 690
Qy 688 TDDSKASVVFCTKQEEVK 706
Db 691 TDDSKASVVFCTKQEEVK 709

RESULT 12

US-09-059-584-15
; Sequence 15, Application US/09059584
; Patent No. 6440701
; GENERAL INFORMATION:
; APPLICANT: Myers, Lisa E
; APPLICANT: Schryvers, Anthony B
; APPLICANT: Harkness, Robin E
; APPLICANT: Loosmore, Sheena M.
; APPLICANT: Du, Run-Pan
; APPLICANT: Yang, Yan-Ping
; APPLICANT: Klein, Michel H
; TITLE OF INVENTION: Transferrin Receptor Genes of Moraxella
; NUMBER OF SEQUENCES: 60
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Sim & McBurney
; STREET: 6th Floor, 330 University Avenue
; CITY: Toronto
; STATE: Ontario
; COUNTRY: Canada
; ZIP: M5G 1R7
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patent in Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/09/059,584
; FILING DATE: 14-APR-1998
; CLASSIFICATION:
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/778,570
; FILING DATE: 03-JAN-1997
; CLASSIFICATION:
; ATTORNEY/AGENT INFORMATION:
; NAME: Stewart, Michael I
; REGISTRATION NUMBER: 24973
; REFERENCE/DOCKET NUMBER: 1038-794
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (416) 595-1155
; TELEFAX: (416) 595-1163
; INFORMATION FOR SEQ ID NO: 15:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 709 amino acids
; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear
US-09-059-584-15

Query Match 64.1%; Score 2365.5; DB 4; Length 709;
Best Local Similarity 67.0%; Pred. No. 4.3e-153;
Matches 495; Conservative 51; Mismatches 130; Indels 63; Gaps 15;

Qy 1 MKHPLTLTLCVAISAVLLTACGG-SGGSNPPAPTPIPNASGSGNTGNTGAGGT----DN 55
Db 1 MKHPLTLTLCVAISAVLLTACGGSSGFFNPASTPIPNAGNSGNAGNAGGTGGANS 60
Qy 56 TANAGNTGGNSGTSANTPEPKYKDVPTDENKKDEVSGIQEPAMGYGMAISKN---LH 112
Db 61 AGNAGGTGGANSAGSASTPEPKYKDVPTDENKAEVSGIQEPAMGYGVELKRNWI 120
Qy 113 KQDTPIDEKDIITLDGKKQVAKGEKSPPLPSLDV-ENKLLDGYIAKNNEADKNAIGRI 171
Db 121 QEEHAKINTNDVVKLE-----QDLKHNPFDSINQNIKNISKEVQTVYNOEKQNI 173
Qy 172 KKDNNK---DKSLSK-----AELAKOIKEDVRKSHFEQFQVLSLKNKI 213
Db 174 KRENKQRPDKLDDVALQAYIEKVLDDRLTELAKPIYE-----KN-INYS 217
Qy 214 NDGTTKATTRDLQYVDYGYLVNDGNLYTVKTDLMNLGPGVGVYNGTITAKELPTODA 273
Db 218 HDKQNKARTDLYKVRSGY--IYRSGYSNIIPKIIAKTGPDGALFYQGTQAKQLPV 274
Qy 274 VKYKGHWDFMTDVAQQRNRFSEVKENLAQRYGYGASSKDEYNRLITDEKNKPERYNG 333
Db 275 VKYKGTWDFMTDAKKQGSFSGTSQRLAGDRYSAMSYHEYPSLLTDEKNKPDNYNG 334
Qy 334 HSSEFTVNFKDKLTGELFSLNLODSRKGNTTKRYDIDANIYGNRFRGSATASDKAEAS 393
Db 335 HSSEFTVDFSKSLKGBELSNIOQHGKSVNKTTRYDIDANIYGNRFRGSATASDTT 394
Qy 394 KTKHPFTSDAKNSLEGGFYGNABELAGKFLTNDNKLFGVFGAKRESKAGEKTEAILDAY 453
Db 395 KSKHPFTSDAKNSLEGGFYGNABELAGKFLTNDNKLFGVFGAKRESKAGEKTEAILDAY 454
Qy 454 ALGTFNKNAT--TFTPTTKQLDNFGNAKLVLGSTVIDLVPTGVTKDVNEFTKNKPD 511
Db 455 ALGTFNKGTTNPAFTANSKELDNFGNAKLVLGSTVIDLVPTGATKDVNEF-KEK 513
Qy 512 ATNKAETLMVNDKVSVKTYGYGRNFYLYKFGELSVGTSNVFLQGETATTGKAVPTK 571
Db 514 ATNKAETLMVNDKVSVKTYGYGRNFYLYKFGELSVGTSNVFLQGETATTGKAVPT 570
Qy 572 GTAKYLGNNWGYITGKD-----SSKSFNEAQAQVADFDIDFEKSVKGLTTRKQD 627
Db 571 GTAKYLGNNWGYITGKDTGTSTGKSFNEAQAQVADFDIDFEKSVKGLTTRKQD 630
Qy 628 TGDIAAGNGWTGKASTTKADAGYKIDSSSTGKSIIVKDAEVTGGFYGNANEMGGSF 687
Db 631 TGOIAGNGWTGTASTAKANVGGYKIDSSSTGKSIIVENAKVTGGFYGNANEMGGSF 690
Qy 688 TDDSKASVVFCTKQEEVK 706
Db 691 TDDSKASVVFCTKQEEVK 709

RESULT 13

US-08-778-570B-16
; Sequence 16, Application US/08778570B
; Patent No. 6437096
; GENERAL INFORMATION:
; APPLICANT: Myers, Lisa E
; APPLICANT: Schryvers, Anthony B
; APPLICANT: Harkness, Robin E
; APPLICANT: Loosmore, Sheena M.
; APPLICANT: Du, Run-Pan
; APPLICANT: Yang, Yan-Ping
; APPLICANT: Klein, Michel H
; TITLE OF INVENTION: Transferrin Receptor Genes of Moraxella
; NUMBER OF SEQUENCES: 43
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Sim & McBurney
; STREET: 6th Floor, 330 University Avenue
; CITY: Toronto
; STATE: Ontario
; COUNTRY: Canada

```
; ZIP: MSG 1R7
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/778,570B
; FILING DATE: 03-JAN-1997
; CLASSIFICATION: 536
; ATTORNEY/AGENT INFORMATION:
; NAME: Stewart, Michael I
; REGISTRATION NUMBER: 24973
; REFERENCE/DOCKET NUMBER: 1038-664
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (416) 595-1155
; TELEFAX: (416) 595-1163
; INFORMATION FOR SEQ ID NO: 16:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 689 amino acids
; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; US-08-778-570B-16

Query Match 61.5%; Score 2268.5; DB 4; Length 689;
Best Local Similarity 66.1%; Pred. No. 1.7e-146;
Matches 475; Conservative 51; Mismatches 130; Indels 63; Gaps 15;

Qy 21 CGG-SGGSNPAPPTIPNAGSGNGTGTGNAGGT-----DNTANAGTGTGNSGTGSANTP 75
Db 1 CGSGSGGFNPASTPIPNAGSGNAGNAGGTGGAGNSGAGSASTP 60
Qy 76 EPKYKDVPTDENKDESVGIQEPAMGYGMAISKMN---LHKQDPTLDEKDIITLDGKKQ 132
Db 61 EPKYKDVPTDENKKAESVGIQEPAMGYGVELKLRNWIPOQEHEHAKINTNDVVKLE---- 116
Qy 133 VAKGEKSPFSLDV-ENKLLDGYIAKMNADKNAIGRIKKDNK---DKSLSK----- 182
Db 117 ---GDLKHNPFDSIWQNIKNKSEVQTVYNQEKNIEDQIKRENKQRPDKKLDVALQAY 173
Qy 183 -----RELAKQIKEDYKSHQFOVLSSLKNIKFIHNSDGTTKATTDLQVVDYGY 233
Db 174 IEKVLDDRLTELAKPIYE-----KN-INYSHDKONKARTDLKYRSGY- 216

; ZIP: MSG 1R7
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/09/059,584
; FILING DATE: 03-JAN-1997
; CLASSIFICATION: 536
; ATTORNEY/AGENT INFORMATION:
; NAME: Stewart, Michael I
; REGISTRATION NUMBER: 24973
; REFERENCE/DOCKET NUMBER: 1038-794
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (416) 595-1155
; TELEFAX: (416) 595-1163
; INFORMATION FOR SEQ ID NO: 16:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 689 amino acids
; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; US-09-059-584-16

Query Match 61.5%; Score 2268.5; DB 4; Length 689;
Best Local Similarity 66.1%; Pred. No. 1.7e-146;
Matches 475; Conservative 51; Mismatches 130; Indels 63; Gaps 15;

Qy 21 CGG-SGGSNPAPPTIPNAGSGNGTGTGNAGGT-----DNTANAGTGTGNSGTGSANTP 75
Db 1 CGSGSGGFNPASTPIPNAGSGNAGNAGGTGGAGNSGAGSASTP 60
Qy 76 EPKYKDVPTDENKDESVGIQEPAMGYGMAISKMN---LHKQDPTLDEKDIITLDGKKQ 132
Db 61 EPKYKDVPTDENKKAESVGIQEPAMGYGVELKLRNWIPOQEHEHAKINTNDVVKLE---- 116
Qy 133 VAKGEKSPFSLDV-ENKLLDGYIAKMNADKNAIGRIKKDNK---DKSLSK----- 182
Db 117 ---GDLKHNPFDSIWQNIKNKSEVQTVYNQEKNIEDQIKRENKQRPDKKLDVALQAY 173
Qy 183 -----RELAKQIKEDYKSHQFOVLSSLKNIKFIHNSDGTTKATTDLQVVDYGY 233
Db 174 IEKVLDDRLTELAKPIYE-----KN-INYSHDKONKARTDLKYRSGY- 216
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Qy 648 GGYKIDSSSTGKSIVIKDAEVTGCGFYGPANENMGSGSFTHNTDDSKASVWFGTKRQEEVK 706
Db 631 GGYKIDSSSTGKSIVIEAKVTGCGFYGPANENMGSGSFTHNTDDSKASVWFGTKRQEEVK 689

RESULT 14
US-09-059-584-16
; Sequence 16, Application US/09059584
; Patent No. 6440701
; GENERAL INFORMATION:
; APPLICANT: Myers, Lisa E
; APPLICANT: Schryvers, Anthony B
; APPLICANT: Harkness, Robin E
; APPLICANT: Loosmore, Sheena M.
; APPLICANT: Du, Run-Pan
; APPLICANT: Yang, Yan-Ping
; APPLICANT: Klein, Michel H
; TITLE OF INVENTION: Transferrin Receptor Genes of Moraxella
; NUMBER OF SEQUENCES: 60
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Sim & McBurney
; STREET: 6th Floor, 330 University Avenue
; CITY: Toronto
; STATE: Ontario
; COUNTRY: Canada
; ZIP: M5G 1R7
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/09/059,584
; FILING DATE: 14-APR-1998
; CLASSIFICATION:
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/778,570
; FILING DATE: 03-JAN-1997
; CLASSIFICATION:
; ATTORNEY/AGENT INFORMATION:
; NAME: Stewart, Michael I
; REGISTRATION NUMBER: 24973
; REFERENCE/DOCKET NUMBER: 1038-794
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (416) 595-1155
; TELEFAX: (416) 595-1163
; INFORMATION FOR SEQ ID NO: 16:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 689 amino acids
; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; US-09-059-584-16
```

```
Query Match 61.5%; Score 2268.5; DB 4; Length 689;
Best Local Similarity 66.1%; Pred. No. 1.7e-146;
Matches 475; Conservative 51; Mismatches 130; Indels 63; Gaps 15;

Qy 21 CGG-SGGSNPAPPTIPNAGSGNGTGTGNAGGT-----DNTANAGTGTGNSGTGSANTP 75
Db 1 CGSGSGGFNPASTPIPNAGSGNAGNAGGTGGAGNSGAGSASTP 60
Qy 76 EPKYKDVPTDENKDESVGIQEPAMGYGMAISKMN---LHKQDPTLDEKDIITLDGKKQ 132
Db 61 EPKYKDVPTDENKKAESVGIQEPAMGYGVELKLRNWIPOQEHEHAKINTNDVVKLE---- 116
Qy 133 VAKGEKSPFSLDV-ENKLLDGYIAKMNADKNAIGRIKKDNK---DKSLSK----- 182
Db 117 ---GDLKHNPFDSIWQNIKNKSEVQTVYNQEKNIEDQIKRENKQRPDKKLDVALQAY 173
Qy 183 -----RELAKQIKEDYKSHQFOVLSSLKNIKFIHNSDGTTKATTDLQVVDYGY 233
Db 174 IEKVLDDRLTELAKPIYE-----KN-INYSHDKONKARTDLKYRSGY- 216
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Qy 234 LVNDGNLYLTKTDELWNLPVGGVYNGTITAKELPTQDAVKYKGHWDFMTDVAQKORNF 293
Db 217 -IYRSGYNNIIPKKIAKTGFCALFYGTQAKQLPVSQ-VKYKGTWDFMTDAKKGOSFS 274
Qy 294 SEVKENLAQRYGASSKDEYNRLITDEKNKPERYNGEYGHSSSEFTVNFKDKLITGELFS 353
Db 275 SFGTSQRLAGDRYSAMSVEYPSLITDEKNKPDYNGEYGHSSSEFTVDFSKSLKGLSS 334
Qy 354 NLODSRKNVTKRYDYDANIYGNRFRGSATASDKABASKTKGPPFTSDAKNSLEGPGY 413
Db 335 NIQDHKGSVNKTKRYDIDANIYGNRFRGSATASDTTEASKSKHPFTSDAKNSLEGPGY 394
Qy 414 PNAELACKELTNDNKLFGVCAKESKAGKTEAILDAYALGTENKKNAT--TFTPTK 471
Db 395 PNAELACKELTNDNKLFGVCAKESKAGKTEAILDAYALGTENKKNAT--TFTPTK 454
Qy 472 KQDNFNGNAKLVLGSTVIDLPTGVTVDVNEFTKNKPDSTNKAETLMVNDKVSVKTY 531
Db 455 KQDNFNGNAKLVLGSTVIDLPTGVTVDVNEFTKNKPDSTNKAETLMVNDKVSVKTY 513
Qy 532 GYGRNFYKFGELSVGTSNSVFLQGTATTTGKAVPTKTAKYLGNNWGYITGKD--- 588
Db 514 GYGRNFYKFGELSVGTSNSVFLQGTATTTGKAVPTKTAKYLGNNWGYITGKD--- 570
Qy 589 -SSKSFNEAQQVADPDIDFEKKSVMKGLTTRKQDQDPVENITGDIAGNGWTGKATTKADA 647
Db 571 STGKSFNEAQQVADPDIDFEKKSVMKGLTTRKQDQDPVENITGDIAGNGWTGKATTKADA 630
Qy 648 GGYKIDSSSTGKSIVIKDAEVTGTFYGNANEMGGSFTHNTDDSKASVVFQTKRQBEVK 706
Db 631 GGYKIDSSSTGKSIVIKDAEVTGTFYGNANEMGGSFTHNTDDSKASVVFQTKRQBEVK 689

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RESULT 15

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US-09-059-584-53
; Sequence 53, Application US/09059584
; Patent No. 6440701
; GENERAL INFORMATION:
; APPLICANT: Myers, Lisa E
; APPLICANT: Schryvers, Anthony B
; APPLICANT: Harkness, Robin E
; APPLICANT: Loosmore, Sheena M.
; APPLICANT: Du, Run-Pan
; APPLICANT: Yang, Yan-Ping
; APPLICANT: Klein, Michel H
; TITLE OF INVENTION: Transferrin Receptor Genes of Moraxella
; NUMBER OF SEQUENCES: 60
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Sim & McBurney
; STREET: 6th Floor, 330 University Avenue
; CITY: Toronto
; STATE: Ontario
; COUNTRY: Canada
; ZIP: M5G 1R7
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/09/059,584
; FILING DATE: 14-APR-1998
; CLASSIFICATION:
; PRIOR APPLICATION NUMBER: US 08/778,570
; FILING DATE: 03-JAN-1997
; CLASSIFICATION:
; ATTORNEY/AGENT INFORMATION:
; NAME: Stewart, Michael I
; REGISTRATION NUMBER: 24973
; REFERENCE/DOCKET NUMBER: 1038-794
; TELECOMMUNICATION INFORMATION:

```

```

; TELEPHONE: (416) 595-1155
; TELEFAX: (416) 595-1163
; INFORMATION FOR SEQ ID NO: 53:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 713 amino acids
; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear
US-09-059-584-53

```

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Query Match 60.9%; Score 2246.5; DB 4; Length 713;
Best Local Similarity 63.5%; Pred. No. 5,7e-145;
Matches 472; Conservative 76; Mismatches 128; Indels 67; Gaps 19;

Qy 1 MKHILPTLTCVAISAVLLTACGGSGSNPPAPPIPNASGSGNTGNTAGG---TNN-- 55
Db 1 MKHILPTLTCVAISAVLLTACGGSGSNPPAPPIPNASGSGNTGNTAGG---TNN-- 60
Qy 56 -----TANAGNTGCTSGTSANTPEPKYQDVPTDENKDKDEVSGIOBPAMGYGVALS 107
Db 61 NAGANSCTGNAGNSGNANSCTSGTSANTPEPKYQDVPTDENKDKDEVSGIOBPAMGYAMELK 120
Qy 108 KMLNH-----KQDTPLEDKDIITLDGKKQVAKGEKSPFPFSLDVENKLLDGYIAK 158
Db 121 LRNAHPLNPNKNKAEKRIALDQDLVAVB-----GDLTNIPF-----DKNLEIYKK 168
Qy 159 MN-----EADKNAIGDRIKKONKDKSLKAEIAKQIKEDVRKS--HEFQQVLSLKNKIF 211
Db 169 SSEVSVFEAQKGQGIENNTRLTHKD--LSSEKQEAKEALDNALQTQFAQ--EKYKELIE 224
Qy 212 HSNQDITTKATRLQVYDYGVLVNDGNLYLTKT---DELWNL-GPVGGVYNGTITAK 266
Db 225 NAHDKSDARNRDLLEVYVKSFG-----NYLSGTYATDHDKKTNYRGYGYALYKGSSETAK 278
Qy 267 ELPTQDAVKYKGHWDFMTDVAQKORNFSEYKENLQAGRYCASSKDEYNRLITDEKNKPE 326
Db 279 ELP-QTSAKYKYGWFDFMTD-ATLDNKYTDLPGLARQTQWLSYSTDEYATLITDKNNKPS 336
Qy 327 RYNGEYGHSSSEFTVNFKDKLITGELFSNLQDSRKGNVTKTKRYDIDANIYGNRFRGSATA 386
Db 337 DYNGAYGHSSSEFTVNFADKKIKGLISNQLSGTA--VTAKERYKIEADIHGNRFRGSATA 394
Qy 387 SDKAEASKTKHPFTSDAKNSLEGGFYGNABEELAGKFLTNDNKLFGVFGAKRESKAGEKT 446
Db 395 SDKAEASKTKHPFTSDATNKLGGFYGNABEELAGKFLTNDNKLFGVFGAKRDKV--EKT 452
Qy 447 EAILDAYALGTENK--NNATFTPTTKQDNFNGNAKLVLGSTVIDLPTGVTKD--VNE 503
Db 453 EAILDAYALGTENK--NNATFTPTTKQDNFNGNAKLVLGSTVINILVSTDATKNETKK 512
Qy 504 FTNKPDSATNKAETLMVNDKVSVKTYGYGRNPEYLFKFGELSVGTSNSVFLQGTATT 563
Db 513 FTNKPDSATNKAETLMVNDKVSVKTYGYGRNPEYLFKFGELSVGTSNSVFLQGTATT 570
Qy 564 GEKAVPTKTAKYLGNNWGYITGDKSSKSFNEAQQVADPDIDFEKKSVMKGLTTRKQDQDP 623
Db 571 GEKAVPTKTAKYLGNNWGYITGDKSSKSFNEAQQVADPDIDFEKKSVMKGLTTRKQDQDP 630
Qy 624 VFNITGDIAGNGWTGKATTKADAGYKIDSSSTGKSIVIKDAEVTGTFYGNANEMGGS 683
Db 631 VFNITGDIAGNGWTGKATTKADAGYKIDSSSTGKSIVIKDAEVTGTFYGNANEMGGS 690
Qy 684 FTHTDDSKASVVFQTKRQBEVK 706
Db 691 FTHTDDSKASVVFQTKRQBEVK 713

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RESULT 16

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US-08-949-941B-2
; Sequence 2, Application US/08949941B
; Patent No. 5972657
; GENERAL INFORMATION:
; APPLICANT: Murphy, Timothy F.

```

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; APPLICANT: Sethi, Sanjay
; TITLE OF INVENTION: Gene Encoding Outer Membrane
; TITLE OF INVENTION: Protein B1 of Moraxella catarrhalis
; NUMBER OF SEQUENCES: 9
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Hodgson, Russ, Andrews, Woods & Goodyear
; ADDRESSEE: LLP
; STREET: 1800 One M&T Plaza
; CITY: Buffalo
; STATE: New York
; COUNTRY: United States
; ZIP: 14203-2391
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Diskette, 3.5 inch, 1.44 Kb storage
; COMPUTER: IBM Compatible
; OPERATING SYSTEM: Windows 95
; SOFTWARE: Wordperfect
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/949,941B
; FILING DATE: 14 October 1997
; ATTORNEY/AGENT INFORMATION:
; NAME: Nelson, M. Bud
; REGISTRATION NUMBER: 35,300
; REFERENCE/DOCKET NUMBER: 11520.00
; TELEPHONE: (716) 856-4000
; TELEFAX: (716) 849-0349
; INFORMATION FOR SEQ ID NO: 2:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 707 residues
; TYPE: amino acid
; TOPOLOGY: linear
; DESCRIPTION: protein
; HYPOTHEICAL: yes
; US-08-949-941B-2

Query Match 51.1%; Score 1891; DB 2; Length 707;
Best Local Similarity 56.6%; Pred. No. 9.9e-121;
Matches 413; Conservative 84; Mismatches 185; Indels 48; Gaps 20;

Qy 1 MKHPLTLTLCVAISAVLLTACGGSGGNPPAPTIPINASGSGNTGNTGNAGGTTNTANAG 60
Db 1 MKHPLTLTLCVAISAVLLTACGGSGGNPPAPTIPINASGSGNTGNTGNAGGTTNTANAG 60
Qy 61 NTGTGNSGTSGANTPEPKYKDVPTDENKDVSGIQEPAMGYGNALSKMNLHKQDTPLD 120
Db 61 NTGTGSSGTSGASTSEPKYQDVPTTPNKEQVSSIQEPAMGYAMELKLRNAHPNPKET 120
Qy 121 EKDIITLDGKKQVA-KGEKSPLPFSLDVENKLLDG--YIAQWNEADKNAIGDRIKKDKND 177
Db 121 EKR-IALDQKDLVAEGNLTNIPFDKNLIEYLKKSPEVSKFNE-QKGGIENNTLRLTHKD 178
Qy 178 KSLKAEALAKQIKEDVRKSHFQVLSLKNKIPIHSDGTGTTKATRLQVYDYGYLVND 237
Db 179 --LSSEQKEAKVEALDNAQE-----KYBELIENAHDKSDARNRDLKYVKSGF----- 225
Qy 238 GNYLTVTKT---DELNL-GRPVGGVYNGTTTAKELPTQDAVKYKGHWDFMTDAVKQRN 292
Db 226 -NULSGVTATDHDKKTNYRGYGYALYKGETAKELP-QTSAKYKGYWDFMTD-ATLDNK 282
Qy 293 FSEYKENLQAGRYGYGASSKDEYNRLLTDEKNKPRYNGEYGHSSSEFTVNFKDKKLTGELF 352
Db 283 YTDLPGARQOTQWRSVSTDEYATLLTDKNKPSDYNGAYGHSSEFDVNFADKVTGKLI 342
Qy 353 SNLQDSKGNVTYKRVYDIDANIYGNRFRGSATASDAKAEASKTKHPFTSDAKNSLEGFY 412
Db 343 SN-QLSGK-TVTKERYKIEADIHGNRFRGSIAASEKTDESKSKHPFTSDAKDLREGFY 400
Qy 413 GPNAEELAGKFLTNDKILFGVFGAKRSKAGEKTEAILDAVALGTENKNNAT--TFTPTT 470
Db 401 GPKGEELAGKFLTDNDKILFGVFGAKRSKAGEKTEAILDAVALGTENKNNAT--TFTPTT 460

; APPLICANT: Myers, Lisa E
; APPLICANT: Schryvers, Anthony B
; APPLICANT: Harkness, Robin E
; APPLICANT: Loosmore, Sheena M.
; APPLICANT: Du, Run-Pan
; APPLICANT: Yang, Yan-Ping
; APPLICANT: Klein, Michel H
; TITLE OF INVENTION: Transferrin Receptor Genes of Moraxella
; NUMBER OF SEQUENCES: 60
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Sim & McBurney
; STREET: 6th Floor, 330 University Avenue
; CITY: Toronto
; STATE: Ontario
; COUNTRY: Canada
; ZIP: M5G 1R7
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/09/059,584
; FILING DATE: 14-APR-1998
; CLASSIFICATION:
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/778,570
; FILING DATE: 03-JAN-1997
; CLASSIFICATION:
; ATTORNEY/AGENT INFORMATION:
; NAME: Stewart, Michael I
; REGISTRATION NUMBER: 24973
; REFERENCE/DOCKET NUMBER: 1038-794
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (416) 595-1155
; TELEFAX: (416) 595-1163
; INFORMATION FOR SEQ ID NO: 51:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 712 amino acids
; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; US-09-059-584-51

Query Match 51.1%; Score 1884.5; DB 4; Length 712;
Best Local Similarity 55.8%; Pred. No. 2.8e-120;
Matches 412; Conservative 88; Mismatches 178; Indels 61; Gaps 22;

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QY 1 MKHPLTTLCAVSAVLLTACGGSGSNPPPTPIPNASGSGNTGN-TGNAGGTDNTANA 59
DB 1 MKHPLTTLCAVSAVLLTACGGSGSNPPPTPIPNAGGAGNAGSGTGGAGSGTDNAANA 60
QY 60 GNTGTSNCGTSANTPEPKYKDVPTDENKDKDEVSGIQEPAMGYGNALSKMN---LHKQOD 116
DB 61 GSTGASSGTSASTQPKYQDVPTDKKDKDEVSGIQEPAMGYGVELKLRNWIPOBQBEH 120
QY 117 TPLDEKDIITLGGKQVAKGKSPPLPFSLDV-ENKLLDGYIAKNEADKNAIGRIKKDN 175
DB 121 AKINTNDVVKLE-----GDLKHNPFDFNSIWQNIKNSKEVQTVYVNOBKONIENQIKEN 173
QY 176 K--DKLSKAEALAKQIKEDVRKSHFEQVLSLKNKIIFHSN-----DGTTKATTRDLQYV 228
DB 174 KELDKTALKA-LIEKVLQD-----YLSLAKPIYEKMINDSHDQKQKARTDLKIV 223
QY 229 DYGYLVNDGNYLTVKTDELNLGVPVGVYNGTTTAKELPFTQDAVKYKGHWDFTMDVAK 288
DB 224 RSGIYRSGYSNIDIQ-KKIAKTGPDGALFYKGTQAKQLPVBSE-VKYKGTWDFMTD-AK 280
QY 289 QNRPFSEVKENLQAGRYGASDKBYNLLTDEKKNKPERYNGEYGHSSSEFTVNFKKKLT 348
DB 281 KGQSPSPER--RAGDRYSAMSSHEYPSSLTDDKNKPNYNDYGHSSSEFTVDFSKSLT 338
QY 349 GELFSNLODRKGNVTKTKRYDIDANIYGNRFRGSATASDKAEASKTKHPFTSDAKNSLE 408
DB 339 GGLFSNLQDHHKGVTKTKRYDIDNARIHGNRFRGSATAINKDNESKAKHPFTSDADNRLE 398
QY 409 GGFYGNABEELAGKFLTDNKLFGVFGAKRESKAGEKTEAILDAYALGTFFNKNAT--TF 466
DB 399 GGFYGNABEELAGKFLTDNKLFGVFGAKQSEAKE-TEAILDAYALGTFFNKSCTTNPAF 457
QY 467 TPTFKKQLDNFGNAKKVLGSLTVIDLPTGVTKDVFNFTKPKDSATNKAAGETLMVNDKV 526
DB 458 TANSKELDNFGNINKVLGSLTVIDL--TQGNDFVKTIIDKEKPAATTNQAAGEPLTVNDKV 515
QY 527 SVKTYGYNPEYLFKGLSVGTSNVSFLOGERTATTG--EKAVPTKGTAKYLGNWVGYI 584
DB 516 RVQV--CCSNLEHLFGSLSGDSNVSFLOGERTATKGDOKKAMPVAGNAKYRGTWAGYV 573
QY 585 TGKDSKSFNAQDVAD-----FDIDFEKKSVMKGLTKTKDQD--PVFNITGDIAGNGW 636
DB 574 AGSGNTSKAYEAQADNANRAEFVDVPANKSLTKLIPNTSSDGKSAFDITATIDGNFP 633
QY 637 TKASTTKADAGGYKIDS--SSTGKSIIVIKDAEVTGFGYGNANBMGSGFTHTD----- 689
DB 634 SGKANTPDIETGGLKIDSKNSSEGR-VIVKDAIVIGFGYGPQANBELGSGFTYKSNDAQN 692
QY 690 --DSKASVVFYTKRQEEVK 706
DB 693 DKDSSASVVFYTKRQEEVK 711

RESULT 18
US-09-540-236-2388
; Sequence 2388, Application US/09540236
; Patent No. 6673910
; GENERAL INFORMATION:
; APPLICANT: Gary L. Breton et al.
; TITLE OF INVENTION: NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING TO MORAXELLA CATAR
; FILE REFERENCE: 2709.2005-001
; CURRENT APPLICATION NUMBER: US/09/540,236
; CURRENT FILING DATE: 2000-04-04
; NUMBER OF SEQ ID NOS: 3840
; SEQ ID NO 2388
; LENGTH: 416
; TYPE: PRT
; ORGANISM: M.catarhalis
US-09-540-236-2388

Query Match 42.7%; Score 1574; DB 4; Length 416;

Best Local Similarity 81.5%; Pred. No. 2e-99;
Matches 313; Conservative 24; Mismatches 37; Indels 10; Gaps 6;
QY 325 PERVNGYGHSSSEFTVNFKDKLTGELFSNLODRKGNVTKTKRYDIDANIYGNRFRGSA 384
DB 35 PSNTNGAYGHSSSEFTVNFANKKVTGKLISN-QLSGK-TVTAKERYKIEADIHGNRFRGSA 92
QY 385 TASDKAEASKTKHPFTSDAKNSLGGFGVGNABEELAGKFLTDNKLFGVFGAKRESKAGE 444
DB 93 IASETKDESKHPFTSDAKDLGGFGVGNABEELAGKFLTDNKLFGVFGAKQGEA-K 151
QY 445 KTEAILDAYALGTFFNKNATTTFTPTKKQLDNFGNAKKVLGSLTVIDLPTGVTKDVNNEF 504
DB 152 PTEAILDAYALGTNTNDATTTFTPTKKQLDNFGNAKKVLGSLTVIDLPTDATKDVNNEF 211
QY 505 TKNTPDSATNKAAGETLMVNDKVSUKTYGYGNRFEYLFKGLSVGTSNVSFLOGERTATTG 564
DB 212 TKNTPESATNKAAGETLMVNDKVSUKT--YGNRFEYLFKGLSVGTSNVSFLOGERTATTG 269
QY 565 EKAVPTTKGTAKYLGNWVGYITGKD-----SSKSFEAQQDVADFDIDFEKKSVMKGLTKTKDR 620
DB 270 EKAVPTTKGTAKYLGNWVGYITAGKDTGAGSSKGFDTAKDVADFDIDFEKKTVNGKLTUQOR 329
QY 621 QDPVFNITGDIAGNGTCKASTTKADAGGYKID--SSSTGKSIIVIKDAEVTGFGYGNANE 679
DB 330 QDPVFNITGQIAGNGTGTASTAKANAGGYNIDSSSTNKSIVIKDAEVTGFGYGNANE 389
QY 680 MGSFTHTNDDSKASVVFYTKRQE 703
DB 390 MGSFTHTNADDSKVSVVFYTKRQE 413

RESULT 19
US-09-405-728-3
; Sequence 3, Application US/09405728
; Patent No. 6391316
; GENERAL INFORMATION:
; APPLICANT: Potter, Andrew A.
; APPLICANT: Rioux, Clement
; APPLICANT: Schryvers, Anthony B.
; TITLE OF INVENTION: CLONING AND EXPRESSION OF HAEMOPHILUS SOMNUS
; TITLE OF INVENTION: TRANSFERIN-BINDING PROTEINS
; FILE REFERENCE: 9000-0049.20
; CURRENT APPLICATION NUMBER: US/09/405,728
; CURRENT FILING DATE: 1999-09-24
; EARLIER APPLICATION NUMBER: US 09/267,749
; EARLIER FILING DATE: 1999-03-10
; NUMBER OF SEQ ID NOS: 5
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 3
; LENGTH: 662
; TYPE: PRT
; ORGANISM: Haemophilus somnus
US-09-405-728-3

Query Match 23.4%; Score 863.5; DB 3; Length 662;
Best Local Similarity 35.0%; Pred. No. 1.1e-50;
Matches 262; Conservative 77; Mismatches 250; Indels 159; Gaps 30;
QY 13 ISAVLLTAC-CGSGG--SNPPAPTPIPNASGSGNTGNTGNAGGTDNTANAGTGTGNSGT 69
DB 12 LSVALLSACSGKGGFDLDDVEHTP-PSSSGS----- 43
QY 70 GSANTPEPKYKDVPTDENKDKDEVSGIQEPAMGYGNALSKMNHLKQODTLPDEKDIITLDG 129
DB 44 -----RPTYQDVPTGQRQEQIIVEINSFALGYATEIPRRNISPMPTTGTKESNARVAIT 97
QY 130 KQOVAKGKSP---PFSLDVENKLLDGYIAKNEADKNAIGRIKKDNKDKSLKAEALAK 187
DB 98 AQOVA-----FLSMPP-----NSIKEDFI-----KELIAENTKKNARG----- 131
QY 188 QIKEDVRKSHFEQVLSLKNKIIFHSNNDGTTKATTRDLQYVDYGYLVNDGNYLTV----- 243

Db 132 ----DVYFDDTDDVL-----FAHDSGLAHKRDLYVVRGVVLGTRKRIELVFSHDK 179
Qy 244 KTELWNLGPVGVYFNGTTAKELPTQDAVKYKGWDMFTDVAQORNFSE--VKENLQA 302
Db 180 KTRQFPAGVGVYFQGTSPAVLPTQ--TVYGYWDFVSDAFNERTLAEDFTQENSSA 238
Qy 303 ----GRYVGASSKDEYNRLTDEKNKPERYNGYGHSSFTVNFVKDKLTGELFSLQD 357
Db 239 TSNIPEGNOIGATSDM----ALVNRKVSGEKN--IAHSAEFTADFGSKLSGELKSNVY 292
Qy 358 SRKGNV---TKTKYDIDANIYGRFRGSATASDKAEASKTKHPFTSDAKNSLEGGYGP 414
Db 293 SRIENEOQDVKI--RYKIDADIKGNRFVGSATAQEKSHTI-----FGKADAKRLEGGPFG 346
Qy 415 NAEELAGKFLTNDNKLFGVFAKESKAGEKTEAILDAYALGTFPKNNATFTTPTTKOL 474
Db 347 KAEELAGKFLTDDNSLFFVFAKESKAGEKLETRFDVAKISTDSNK-----LEKETM 399
Qy 475 DNFGNAKFLVLSGVTDILVP-----TGV--TKOVNFTKNKPD SATNKA GETLMVNDKVS 527
Db 400 DTFCNAAYLVLDGRQFPLVPESNAGTTGAGNTGKNEFISTIDGSHLNKTNHENHKKYKT 459
Qy 528 VKTYGGRNFEYLKFGEL-----SVGTSNSVFLQERTATTGCK 566
Db 460 VCC----SNLVYKFGSYGEQTTANDASNSTAGAAATTHNSTLTGHLFLTGERSTLT--D 513
Qy 567 AVPTKGTAKYLGW-----VGYITGKDSKSFNEA--QDVADFDIDPEKSKVKGKLTTK 618
Db 514 MAKOSGAARYIGTWOANFLSKGVGVSDGPRNDGSKRAEFDVNFPGKTVTGKFFDA 573
Qy 619 DRQDPVFNI--TGDIAAGNWTGASTTKADAGYKIDSSSTGKSI VI--KDAEVTGGFYGP 675
Db 574 DGIQALTMDSKIEGNGFSGTAKTT---GSLQDKGSGT GAGITVFTFIDAKVDGAFYGP 629
Qy 676 NANEMGSGFTHTDDSKASVVFYKQRE 703
Db 630 NAEBIGGTTISNGTGDYGVGVFGAKQRE 657

RESULT 20

US-08-613-009A-20
; Sequence 20, Application US/08613009A
; Patent No. 6090576

GENERAL INFORMATION:

; APPLICANT: Myers, Lisa E
; APPLICANT: Schryvers, Anthony B
; APPLICANT: Harkness, Robin E
; APPLICANT: Loosmore, Sheena M.
; APPLICANT: Du, Run-Pan
; APPLICANT: Yang, Yan-Ping
; APPLICANT: Klein, Michel H
; TITLE OF INVENTION: Transferrin Receptor Genes of Moraxella
; NUMBER OF SEQUENCES: 31
; CORRESPONDENCE ADDRESSES:
; ADDRESSEE: Sim & McBurney
; STREET: 6th Floor, 330 University Avenue
; CITY: Toronto
; STATE: Ontario
; COUNTRY: Canada
; ZIP: M5G 1R7

COMPUTER READABLE FORM:

; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/613.009A
; FILING DATE: 08-MAR-1996
; CLASSIFICATION: 435
; ATTORNEY/AGENT INFORMATION:
; NAME: Stewart, Michael I
; REGISTRATION NUMBER: 24973
; REFERENCE/DOCKET NUMBER: 1038-542

TELECOMMUNICATION INFORMATION:

; TELEPHONE: (416) 595-1155
; TELEFAX: (416) 595-1163
; INFORMATION FOR SEQ ID NO: 20:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 601 amino acids
; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear
US-08-613-009A-20

Query Match 23.1%; Score 852; DB 3; Length 601;
Best Local Similarity 34.6%; Pred. No. 5,7e-50;
Matches 234; Conservative 100; Mismatches 212; Indels 130; Gaps 27;

Qy 63 GGTNSGTGSANT-----PEPKYKDVPTDENKDKDEVSQIQEPAMGYGALSKMNLH----- 112
Db 24 GGSFDLDSVETVQDMHSPKPYDEKSPQESQDQSVNSGAAVGFVAVKPRRNAHNPKY 83
Qy 113 KQDPTPLDEKDIITLDGKKQVAKGKSPLPFSLDVENKLLDGYIAKMNEADKNAIGDRIK 172
Db 84 KEKHKPLGSD-----WKKLQKGE--PNSFS-----E 108
Qy 173 KDNKDKSLSKAEALAKQIKEDVRKSHBFQVQLSSLKNKIFHSNDGTTKATTRDLQYVDYGY 232
Db 109 RDELEKKGSGSELLIESKWDGQ-----SRVW-----GYTNFT-----YVRSGY 146
Qy 233 YLVNDGNLYTKVTDDELWNLGPGVGVFYNGTTAKELPTQDAVKYKGWDMFTDVAQORNR 292
Db 147 VYLNKN--IDIK--NNIVLFGPDGYLYYKGEKPEKLPFS--EKITYKGTWDTVD--AMEKQR 202
Qy 293 FSEVKENLQAGRYYGASSKDEYNRLTDEKNKPERYNG--EYGHSSSEFTVNFKDKKLTGE 350
Db 203 F--EGLSAGGDSKLSALEEGLV-----RNQAEASSGHTDFGWTSEFFVDFSDKTIKGT 257
Qy 351 LFSN---LQDSRKNVTTKRYDIDANIYGRFRGSATASDKAEASKTKHPFTSDAKNSL 407
Db 258 LYRNNRITQNNSENKQIKTRYTIQATLHGNRFKALAADKG--ATNGSHPFISDS--DSL 315
Qy 408 EGGFYGNABEELAGKFLTNDNKLFGVFGAKRESK-----AGEKTAILDALVALGTENKN 461
Db 316 EGGFYGPKBELAGKFLSNDKNVAAVFGAKQKDKDQKDGNAAGPATETVIDAYRI----- 369
Qy 462 NATTFPTTKQLDNFGNAKFLVLGTVTIDLVPTGVTKOVNFTKNKPD SATNKA GETLM 521
Db 370 ---TGEEFKKEQIDSGDVKKLLVDGVLSLP-----SEGKAAAFQHE 410
Qy 522 VNDKVSVKTYGYGRNFEYLKFGELSVGTSNSVFLQERTATTGEEKAVPTGKTAKYLGWV 581
Db 411 I--EQNGVKATVCCSNLDYMSFGKLSKENKDDMFQGVRTFVS--DVAARTEANAKYRGTWY 468
Qy 582 GYIT-----GKDSKSFNEAQDVADFDIDPEKSKVKGKLTTKDRQDPVENITGDIAGNGW 636
Db 469 GYIANGTSWSEASNOPTGEGNRAEFDVDFSTKKISGTLTAKDRTSPAFITAMIKONGF 528
Qy 637 TGAATTKADAGYKIDSSSTGKSI VIK--DAEVTGFGYGNANEMGSGFTH-----NTDD 690
Db 529 SGVAKTGE---NGFALDPQNTGNSHYTHIEATVSGGFYGNALTEMGSGSFSPGNAPGKQ 585
Qy 691 SKASVFGTKRQBEVK 706
Db 586 EKASVVFAGKRRQLVQ 601

RESULT 21

US-08-778-570B-26
; Sequence 26, Application US/08778570B
; Patent No. 6437096
; GENERAL INFORMATION:
; APPLICANT: Myers, Lisa E
; APPLICANT: Schryvers, Anthony B
; APPLICANT: Harkness, Robin E
; APPLICANT: Loosmore, Sheena M.

[illegible]

	APPLICANT:	Du, Run-Pan	
	APPLICANT:	Yang, Yan-Ping	
	APPLICANT:	Klein, Michael H	
	TITLE OF INVENTION:	Transferrin Receptor Genes of Moraxella	
	NUMBER OF SEQUENCES:	43	
	CORRESPONDENCE ADDRESS:		
	ADDRESSEE:	Sim & McBurney	
	STREET:	6th Floor, 330 University Avenue	
	CITY:	Toronto	
	STATE:	Ontario	
	COUNTRY:	Canada	
	ZIP:	M5G 1R7	
	COMPUTER READABLE FORM:		
	MEDIUM TYPE:	Floppy disk	
	OPERATING SYSTEM:	IBM PC compatible	
	SOFTWARE:	Patent In Release #1.0, Version #1.30	
	CURRENT APPLICATION DATA:		
	APPLICATION NUMBER:	US/08/778,570B	
	FILING DATE:	03-JAN-1997	
	CLASSIFICATION:	536	
	ATTORNEY/AGENT INFORMATION:		
	NAME:	Stewart, Michael I	
	REGISTRATION NUMBER:	1038-664	
	REFERENCE/DOCKET NUMBER:	1038-664	
	TELEPHONE:	(416) 595-1155	
	TELEFAX:	(416) 595-1163	
	INFORMATION FOR SEQ ID NO:	26:	
	SEQUENCE CHARACTERISTICS:		
	LENGTH:	601 amino acids	
	TYPE:	amino acid	
	STRANDEDNESS:	single	
	TOPOLOGY:	linear	
	US-08-778-570B-26		
	Query Match	23.1%; Score 852; DB 4; Length 601;	
	Best Local Similarity	34.6%; Pred. No. 5.7e-50;	
	Matches	234; Conservative 100; Mismatches 212; Indels 130; Gaps 27;	
QY	63	GGTNSGTGSANT-----PEPKYKDVPTDENKKDVEYSGIQEPMGYGMALSKNHLH-----112	
DB	24	GGGFDLDSVETVQMHSKPKEDEKSOPESQQDVSENGAAYGPAVKLPRENAHFNPKY 83	
QY	113	KQDTPLDKDIITLDGKKQVAKGSKPLPFLSDVENLLDCYTAKONEADKAIGDRIK 172	
DB	84	KEKHRLPSMD-----WKLQGE--PNSES-----E 108	
QY	173	KONKDKLSKABELAKOIKEDVRKSHFPQVLSSLKNKI FHSNDGTTKATTRDLQVDYGY 232	
DB	109	RDELEKKRGSSSELIESKWEDGQ-----SRVV-----GYTNFT-----YVRSGY 146	
QY	233	YLVDGNLYLTVTDELNLNLPVGGVFYNGTTTAKELPTQDAVKYKGHWDFMTDVAQRNR 292	
DB	147	VYLNKNN-IDIR-NNIVLFPGDPGLYYRKGEPKSLPS-EKITYGKTWDYVTD-AMEKOR 202	
QY	293	FSEVKENLAQGRYYGASSKDENVRLTLDEKNRPERYNG-EYGHSEPTNVNFKKLTGE 350	
DB	203	P-EGLSAAGDGKSALESLEGVL-----RNQAEASSHTDFGMTSEFEVDFSKTIKGT 257	
QY	351	LFSN---LQDSRKGNVTKTRYDIDANIYGNFRGSATASDKAEASKTHPFTSDAKNSL 407	
DB	258	LYRNNRIITQNSENKQIKTRTYIQTALHGNRFKGAADKG-ATNGSHPFISDS-DLSL 315	
QY	408	EGGFYGPNAEBLAGFLTNNDKLGFGVFAGKRESK-----AGEKTEALLDAYALGTNKN 461	
DB	316	EGGFYGPKEELAGFLSNDNKVAAVFGAKQKDKKXGNAAGPATETVIDAYRI-----369	
QY	462	NATTPPTFKOLDPFGNAKLVLSGTVIDLVPVTGTVKDVNEFTKKNPDSATNAGETLM 521	
DB	370	-----TGEEFKKEQIDSGFDGVKKLVLDGVBSLULP-----SEGNAAFQHE 410	
QY	522	VNDKVSVTKYGYGRNFYELKFGEISVGTSNVSFLQGETATTTBGKAVPTKGTAKYLGNNV 581	

QY 693 ASVVGTKRQBEVK 706
 DB 586 ASVVGAKRQQLVQ 599

RESULT 24
 US-08-867-921-2
 ; Sequence 2, Application US/08867921
 ; Patent No. 6326350
 ; GENERAL INFORMATION:
 ; APPLICANT: JACOBS, Eric
 ; APPLICANT: LEGRAN, Michele
 ; APPLICANT: MAZARIN, Veronique
 ; APPLICANT: BOUCHON-THEISEN, Bernadette
 ; APPLICANT: SCHRYVERS, Anthony B.
 ; APPLICANT: BLOCH, Marie-Aline
 ; TITLE OF INVENTION: DNA FRAGMENTS CODING FOR THE TRANSFERRIN
 ; TITLE OF INVENTION: RECEPTOR OF NEISSERIA MENINGITIDIS
 ; NUMBER OF SEQUENCES: 62
 ; CORRESPONDENCE ADDRESS:
 ; ADDRESSEE: BURNS, DOANE, SWECKER & MATHIS
 ; STREET: P.O. Box 1404
 ; CITY: Alexandria
 ; STATE: VA
 ; COUNTRY: USA
 ; ZIP: 22313-1404
 ; COMPUTER READABLE FORM:
 ; MEDIUM TYPE: Floppy disk
 ; COMPUTER: IBM PC compatible
 ; OPERATING SYSTEM: PC-DOS/MS-DOS
 ; SOFTWARE: Patent in Release #1.0, Version #1.25
 ; CURRENT APPLICATION DATA:
 ; APPLICATION NUMBER: US/08/867,921
 ; FILING DATE: 03-JUN-1997
 ; CLASSIFICATION: 435
 ; PRIOR APPLICATION DATA:
 ; APPLICATION NUMBER: US 08/445,472
 ; FILING DATE: 22-MAY-1995
 ; APPLICATION NUMBER: US 08/361,469
 ; FILING DATE: 22-DEC-1994
 ; CLASSIFICATION: 435
 ; PRIOR APPLICATION DATA:
 ; APPLICATION NUMBER: US 08/078,053
 ; FILING DATE: 18-JUN-1993
 ; CLASSIFICATION: 435
 ; PRIOR APPLICATION DATA:
 ; APPLICATION NUMBER: FR 92 07493
 ; FILING DATE: 19-JUN-1992
 ; ATTORNEY/AGENT INFORMATION:
 ; NAME: McGowan, Malcolm K.
 ; REGISTRATION NUMBER: 39,300
 ; REFERENCE/DOCKET NUMBER: 016100-004
 ; TELECOMMUNICATION INFORMATION:
 ; TELEPHONE: (703) 836-6620
 ; TELEFAX: (703) 836-2021
 ; INFORMATION FOR SEQ ID NO: 2:
 ; SEQUENCE CHARACTERISTICS:
 ; LENGTH: 599 amino acids
 ; TYPE: amino acid
 ; TOPOLOGY: linear
 ; MOLECULE TYPE: protein
 ; US-08-867-921-2

Query Match 22.9%; Score 844; DB 3; Length 599;
 Best Local Similarity 34.7%; Pred No. 2e-49;
 Matches 234; Conservative 98; Mismatches 214; Indels 128; Gaps 27;

QY 63 GGTNSGTGSANT-----PEPKYKDVPTDENKKDEYSGIQEPAMGYGMALSKMNLH----- 112
 DB 24 GGGSPDLDSVETQDMHSPKPYDEKSPQSQDVSNSGAAYGPAVKLPNRNAHFNPKY 83
 QY 113 KQDTPLEKDIITLDGKKQVAKGEKSPLPSPSLDENKLLDGYIAKQNEADKNAIGRIK 172

DB 84 KEKHPGSGMD-----WKKLQRCG--PNSFS-----E 108
 QY 173 KNDKDKSLKABLAQIKEDVRKSHFQQVLSSLNKNIHFHNSDGTTKATTRDLQVYVGY 232
 DB 109 RDELEKKRGSSELIESKWEDQ-----SRVV-----GYTNFT-----YVRSGY 146
 QY 233 YLVNDGNYLTVKTDDELWNILGPGVGVYNGTTAKELPTQDAVKYKGHWDFTDVAQKQNR 292
 DB 147 VYLNKNIN-IDIK--NNIVLFGPDGYLYYKKGKPELS-EXITYKGTWYVTD-AMEKOR 202
 QY 293 PSEVKENLQAGYYGASSKDEYNRLLTDEKNKPRYNG--EYHSSSEFTVNFKOKKLAGE 350
 DB 203 F-EGLGSAAGDKSGALSALLEGVL-----RQAASSGHTDFGWTSEFVDFSDTKTIGT 257
 QY 351 LFSN---LQDSRKGNVTTRYIDANIYGNRFRGSATASDKABASKTKHPTSDAKNSL 407
 DB 258 LYRNNRITQNNSENKQIKTRYITQATLHGNNRFGKALADKG-ATNGSHPFISDS-DSL 315
 QY 408 EGGFYGNABELACKFELTNDKLFVFCAKRESK-----AGEKTEALDVALGTFPKN 461
 DB 316 EGGFYGPKEELAGKFLSNDKNVAAVFGAKQKDKGGENAAGPATETVIDAYRI----- 369
 QY 462 NATTFPTTKQLDNFGNAKKLVLGSTVIDLVPTGVTKD VNEFTKNKPD SATNKAGETLM 521
 DB 370 ---TGEEFKKEQIDSGVDVKLLVDGVLSLLP-----SEGNKAAPQHE 410
 QY 522 VNDKSVKTYGYGRNFBYLFKFGELSVGTSNSVFLQERTATTGKAVPTKGTAKYLGHW 581
 DB 411 I-EQGVKATVCCSNLDYMSFGKLSKENKDDMLQGVRTPV-S-DVAARTEANAKYRGTY 468
 QY 582 GYI---TKOSSKSFNEAQDVADFDIDFEKSVKGLTKDKRQDPVFNITGDIAGNGWTG 638
 DB 469 GYIANGTSWSGEASNGGNRAEFDVDFSTKIKISGLTAKDRTSPAFITAMIKDNGFSG 528
 QY 639 KASTTKADAGYKIDSSSTGKSIVIK-DAEVTGGFYGNANEMGGSFTH-----NTDDSK 692
 DB 529 VAKTGE---NGFALDPQNTGNSHYTHIEATVSGFYGNALIEMGGSFSPGNAPEKQEK 585
 QY 693 ASVVGTKRQBEVK 706
 DB 586 ASVVGAKRQQLVQ 599

RESULT 25
 US-08-448-194-61
 ; Sequence 61, Application US/08448194
 ; Patent No. 6028049
 ; GENERAL INFORMATION:
 ; APPLICANT: JACOBS, Eric
 ; APPLICANT: LEGRAN, Michele
 ; APPLICANT: MAZARIN, Veronique
 ; APPLICANT: BOUCHON-THEISEN, Bernadette
 ; APPLICANT: SCHRYVERS, Anthony B.
 ; APPLICANT: BLOCH, Marie-Aline
 ; TITLE OF INVENTION: DNA FRAGMENTS CODING FOR THE TRANSFERRIN
 ; TITLE OF INVENTION: RECEPTOR OF NEISSERIA MENINGITIDIS
 ; NUMBER OF SEQUENCES: 62
 ; CORRESPONDENCE ADDRESS:
 ; ADDRESSEE: Burns, Doane, Swecker & Mathis
 ; STREET: P.O. Box 1404
 ; CITY: Alexandria
 ; STATE: Virginia
 ; COUNTRY: United States
 ; ZIP: 22313-1404
 ; COMPUTER READABLE FORM:
 ; MEDIUM TYPE: Floppy disk
 ; COMPUTER: IBM PC compatible
 ; OPERATING SYSTEM: PC-DOS/MS-DOS
 ; SOFTWARE: Patent in Release #1.0, Version #1.30
 ; CURRENT APPLICATION DATA:
 ; APPLICATION NUMBER: US/08/448,194
 ; FILING DATE: 23-MAY-1995

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; CLASSIFICATION: 435
; PRIOR APPLICATION DATA:
; FILING DATE: 22-DEC-1994
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/078,053
; FILING DATE: 18-JUN-1993
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: FR 92 07493
; FILING DATE: 19-JUN-1992
; ATTORNEY/AGENT INFORMATION:
; NAME: McGowan, Malcolm M.
; REGISTRATION NUMBER: 39,300
; REFERENCE/DOCKET NUMBER: 016100-005
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (703) 836-6620
; TELEFAX: (703) 836-2021
; INFORMATION FOR SEQ ID NO: 61:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 578 amino acids
; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; MOLECULE TYPE: DNA (genomic)
; US-08-448-194-61

Query Match 22.8%; Score 840.5; DB 3; Length 578;
Best Local Similarity 34.6%; Pred. No. 3.3e-49;
Matches 233; Conservative 98; Mismatches 214; Indels 129; Gaps 27;

Qy 63 GGTSGTGSANT-----PEPKYKDVPTDENKKDVBVSGIQEPAMGYGMALSKMNLH----- 112
Db 4 GGSFOLDVSIVTQDMHSPKPYEKEQPSQDQVSENSGAAYGFAVKLPRNAHFNPKY 63

Qy 113 KQDTPLDKDIITLDGKKQVAKESKPLPSLDVENKLLDYYAKNNEADKNAIGRIK 172
Db 64 KEKHPGLGMD-----WKKLQGE--PNSFS-----E 88

Qy 173 KDNKDKSLKAEALAKI KEDVRKSHFQOVLSSLKNIKIFHSNDGTGTTATTRDLQYVDGY 232
Db 89 RDELEKKGSSSELKSWEDQ-----SRVV-----GYTFT-----YVRSGY 126

Qy 233 YLVNDGNYLVKTDDELNLNLPVGVFYNGTTAKELPTQDAVKYKGHWDFMTDVAQQRN 292
Db 127 VYLNKN--IDIK--NNIVLFGPDGYLYKXKPSKELPS-EKITVYKGTWYVTD-AMEKQR 182

Qy 293 PSEVKENLQAGRYGASCKDIYNRLITDEKNKPRYNG--EYCHSSEFTVNFKDKLTGE 350
Db 183 FE--GGSAAGDKSGALSALBEGVL-----RQAEASSGHTDFGMTSEFVDFDOKTIGT 236

Qy 351 LFSN---LQDSRKGNTVTKRYDIDANIYGNRPRGSATASDKAEASKTKHPFTSDAKNSL 407
Db 237 LYRNRITONNSNKQIKTTRYITQATLHGNRFGKALAAADKG-ATNGSHPFIDS-DSL 294

Qy 408 EGGYGPNAEELAGKFLTNDKFLGVFGAKRESK-----AGEKTEAILDAYALGTFFKN 461
Db 295 EGGYGPNGKEELAGKFLSNDKNVAAFGAKQKDKGNAAGPATETVIDAYRI----- 348

Qy 462 NATFTPTTKQLDNFGNAKLLVGLSTVIDLVPVTGVTKQVNFYKPPDSATNKAETLM 521
Db 349 ---TGEEFKKQIDISFGDVKKLLVDGVLSLLP-----SEGNKAQFQHE 389

Qy 522 VNDKSVKTYGYGNFVYKFGELSGVTSNVSFLOGERTATTGKAVPTKGTAKYLVGNW 581
Db 390 I-EQNGVATVCCNLDYMSFGKUSKENKDDMFLLQGVTPVS-DVAARTEANAKYRGTWY 447

Qy 582 GYI---TGKDSKSFNEAQDVADEIDPEKKSVKGLTTRDQRPQVFNITGDIAGNWGTG 638
Db 448 GYIANGTWSGEASNQEGGNAEFDVDFSTKKISGTLTAKDRTSPAPITAMIKDNGFSG 507

Qy 639 KASTTKADAGYKIDSSSTGHSKVIK-DAEVTGFGFYGNANEMGGSFTH-----NTDDSK 692
Db 508 VAKTGE---NGFALDPQNTGNSHYTHIEATVSGGFYGNNAIEMGGSFSPGNAPGKQEK 564
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Qy 693 ASVVFGTKRQEVK 706
Db 565 ASVVFGAKRQQLVQ 578

RESULT 26
US-08-867-921-61
; Sequence 61, Application US/08867921
; Patent No. 6326350
; GENERAL INFORMATION:
; APPLICANT: JACOBS, Eric
; APPLICANT: LEGRAIN, Michele
; APPLICANT: MAZARIN, Veronique
; APPLICANT: BOUCHON-THIESEN, Bernadette
; APPLICANT: SCHRYVERS, Anthony B.
; APPLICANT: BLOCH, Marie-Aline
; TITLE OF INVENTION: DNA FRAGMENTS CODING FOR THE TRANSFERRIN
; TITLE OF INVENTION: RECEPTOR OF NEISSERIA MENINGITIDIS
; NUMBER OF SEQUENCES: 62
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: BURNS, DOANE, SWECKER & MATHIS
; STREET: P.O. Box 1404
; CITY: Alexandria
; STATE: VA
; COUNTRY: USA
; ZIP: 22313-1404
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/867,921
; FILING DATE: 03-JUN-1997
; CLASSIFICATION: 435
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/445,472
; FILING DATE: 22-MAY-1995
; APPLICATION NUMBER: US 08/361,469
; FILING DATE: 22-DEC-1994
; CLASSIFICATION: 435
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/078,053
; FILING DATE: 18-JUN-1993
; CLASSIFICATION: 435
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: FR 92 07493
; FILING DATE: 19-JUN-1992
; ATTORNEY/AGENT INFORMATION:
; NAME: McGowan, Malcolm K.
; REGISTRATION NUMBER: 39,300
; REFERENCE/DOCKET NUMBER: 016100-004
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (703) 836-6620
; TELEFAX: (703) 836-2021
; INFORMATION FOR SEQ ID NO: 61:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 578 amino acids
; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; MOLECULE TYPE: DNA (genomic)
; US-08-867-921-61

Query Match 22.8%; Score 840.5; DB 3; Length 578;
Best Local Similarity 34.6%; Pred. No. 3.3e-49;
Matches 233; Conservative 98; Mismatches 214; Indels 129; Gaps 27;

Qy 63 GGTSGTGSANT-----PEPKYKDVPTDENKKDVBVSGIQEPAMGYGMALSKMNLH----- 112
Db 4 GGSFOLDVSIVTQDMHSPKPYEKEQPSQDQVSENSGAAYGFAVKLPRNAHFNPKY 63
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; REGISTRATION NUMBER: 24,973
; REFERENCE/DOCKET NUMBER: 1038-410 MIS:jb
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (416) 595-1155
; TELEFAX: (416) 595-1163
; INFORMATION FOR SEQ ID NO: 97:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 598 amino acids
; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; US-08-337-483-97

Query Match          22.6%; Score 833.5; DB 2; Length 598;
Best Local Similarity 34.7%; Pred. No. le-48;
Matches 234; Conservative 98; Mismatches 213; Indels 129; Gaps 28;

Qy 63 GGTSGTGSANT-----PEPKYKDVPTDENKKDEVSIGIQEPAMGYGMALSKNLH----- 112
Db 24 GGGFDLDSVETQDMHSPKPYDEKSPQSQDVSENSGAAYGFAVKLPRNAHFNPYK 83

Qy 113 KQDTPLEKDIITLDGKKQVAKGKSPPLPSLDVKNKLLDGYIAKNMEADKNAIGRIK 172
Db 84 KEKHPLGSM-----WKQLQGE--PNSFS-----E 108

Qy 173 KKNKDKSLSKAELAKQIKEDYKSHFQOVLSSLKKNKIFHSNDGTTKATTRDLQVVDYGY 232
Db 109 RDELEKKRGSSELIESKWEDGQ-----SRVV-----GYTNFT-----YVRSGY 146

Qy 233 YLVNDGNVLTVKTDLNLGLPVGGVFYNGTTTAKELPTQDAVKYKGHWDFMTDVAKQRNR 292
Db 147 VYLNKN--IDIK--NNIVLFGPDGGLYKGPSPKELPS--EKITYGTWYDVT--AMEQR 202

Qy 293 FSEYKENLQAGRYYGASSKDEYNRLLTDEKNKPERYNG--EYHSSEFTVNFKDKLTGE 350
Db 203 F-EGLSAAGDGKSGALSALLEGVL---RQAEASSGHTDFGMTSEPEVDFSDTKTKGT 257

Qy 351 LPSN---LQSRKGNVTTKRYDIDANIGYGRFGSATASDKAEASKTKHPTSDAKNSL 407
Db 258 LYRNNRITQNNSENKQIKTRTYTQATLHGNRFGKALADKG--ATNGSHPFISDS--DSL 315

Qy 408 EGGFGPNAEELAGFLNDKFLGVFGAKRESK-----AGEKTEALDAYALGTGTFKN 461
Db 316 EGGFGPGEELAGFLSNDKNVAVFGAKQKDKGDNAGAPATE--VIDAYRI----- 368

Qy 462 NATTFPTPKQLDNFGNAKLLVLGSTVIDLPTGVTKVNAEFTKNKPDPSATNKAGETLM 521
Db 369 ---TGEEPKQIDSGFDGVKKLLVDGVLSLLP-----SEGKAAAFQHE 409

Qy 522 VNDKSVKTYGYGRNFYLYKFGELSVGTSTNSVFLQERTATTGKAVPTKGTAKYLGWV 581
Db 410 I-EQNGVKATVCCSNLDYMSFGKLSKENKNDMFLQGVTPVS--DVAARTEANAKYRGTWY 467

Qy 582 GVI---TKDSSKSPNEAQDVADFDIDPEKKSVKGLTKTDQDQDPVFNITGDIAGNGWTG 638
Db 468 GYIANGTWSGEASNOEGNRAEPDVFSTKISGTLTAKORTSPAFITAMIKONGFSG 527

Qy 639 KASTTKADAGGYKIDSSSTGKSIVIK--DAEVTGGFGYGNANEMGGSFTH-----NTDDSK 692
Db 528 VAKTGE---NGFALDPQNTGNSHYTHIEATVSGGFGYGNKNAIEMGGSFPGNAPGKQEK 584

Qy 693 ASVFGTKRQBEVK 706
Db 585 ASVVFAGAKRQOLVQ 598

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RESULT 30

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US-08-478-373-97
; Sequence 97, Application US/08478373
; Patent No. 5922841
; GENERAL INFORMATION:
; APPLICANT: Loosmore, Sheena
; APPLICANT: Harkness, Robin

```

```

; APPLICANT: Schryvers, Anthony
; APPLICANT: Chong, Pele
; APPLICANT: Gray-Owen, Scott
; APPLICANT: Yang, Yan-Ping
; APPLICANT: Murdin, Andrew
; APPLICANT: Klein, Michel
; TITLE OF INVENTION: Transferrin Receptor Genes
; NUMBER OF SEQUENCES: 147
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Sim & McBurney
; STREET: Suite 701, 330 University Avenue
; CITY: Toronto
; STATE: Ontario
; COUNTRY: Canada
; ZIP: M5G 1R7
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patent in Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/478,373
; FILING DATE: 07-JUN-1995
; CLASSIFICATION: 435
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/337,483
; FILING DATE: 08-NOV-1994
; CLASSIFICATION: 435
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/175,116
; FILING DATE: 29-DEC-1993
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/148,968
; FILING DATE: 08-NOV-1993
; ATTORNEY/AGENT INFORMATION:
; NAME: Stewart, Michael I
; REGISTRATION NUMBER: 24,973
; REFERENCE/DOCKET NUMBER: 1038-463 MIS:vg
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (416) 595-1155
; TELEFAX: (416) 595-1163
; INFORMATION FOR SEQ ID NO: 97:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 598 amino acids
; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; US-08-478-373-97

```

```

Query Match          22.6%; Score 833.5; DB 2; Length 598;
Best Local Similarity 34.7%; Pred. No. le-48;
Matches 234; Conservative 98; Mismatches 213; Indels 129; Gaps 28;

```

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Qy 63 GGTSGTGSANT-----PEPKYKDVPTDENKKDEVSIGIQEPAMGYGMALSKNLH----- 112
Db 24 GGGFDLDSVETQDMHSPKPYDEKSPQSQDVSENSGAAYGFAVKLPRNAHFNPYK 83

Qy 113 KQDTPLEKDIITLDGKKQVAKGKSPPLPSLDVKNKLLDGYIAKNMEADKNAIGRIK 172
Db 84 KEKHPLGSM-----WKQLQGE--PNSFS-----E 108

Qy 173 KKNKDKSLSKAELAKQIKEDYKSHFQOVLSSLKKNKIFHSNDGTTKATTRDLQVVDYGY 232
Db 109 RDELEKKRGSSELIESKWEDGQ-----SRVV-----GYTNFT-----YVRSGY 146

Qy 233 YLVNDGNVLTVKTDLNLGLPVGGVFYNGTTTAKELPTQDAVKYKGHWDFMTDVAKQRNR 292
Db 147 VYLNKN--IDIK--NNIVLFGPDGGLYKGPSPKELPS--EKITYGTWYDVT--AMEQR 202

Qy 293 FSEYKENLQAGRYYGASSKDEYNRLLTDEKNKPERYNG--EYHSSEFTVNFKDKLTGE 350
Db 203 F-EGLSAAGDGKSGALSALLEGVL---RQAEASSGHTDFGMTSEPEVDFSDTKTKGT 257

```



```

; REFERENCE/DOCKET NUMBER: 1038-720
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (416) 595-1155
; TELEFAX: (416) 595-1163
; INFORMATION FOR SEQ ID NO: 97:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 598 amino acids
; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear
US-08-897-438-97

Query Match      22.6%; Score 833.5; DB 3; Length 598;
Best Local Similarity 34.7%; Pred. No. 1e-48;
Matches 234; Conservative 98; Mismatches 213; Indels 129; Gaps 28;

Qy 63 GGTNSGTGSANT-----PEPKYKDVPTDENKDKRVSGIQBPAMGYGMALSKMNLH----- 112
Db 24 GGSFDDLSVETVQDMHSPKPYEDEKSPQSDVSENSGAAYGFAVKLPRNAHFNPKY 83
Qy 113 KQDPTPLDEKDIITLDGKKQVAKGEKSPLPFSLDVENKLLDGYIAKMEADKNAIGDRIK 172
Db 84 KEKHPLGSM-----WKKLQGE--PNSFS-----E 108
Qy 173 KDNKDKSLSAEALAKQIKEDVRKSHFQVQLSSLNKIFHSNDGTTKATTRDLOVYDGY 232
Db 109 RDELEKRGSELTESKWEDQ-----SRVV-----GYTNFT-----YVRSY 146
Qy 233 YLVNDGNYLTKTDELNNLGPVGVYNGTTTAKELPTQDAVKYKGHWDPMTDVAKQNR 292
Db 147 VYLNKN-IDIK-NNIVLFGPDGGLYKGEKPELPS-EKITTYKGWIDVTD-AMEKQR 202
Qy 293 FSEVKENLQAGRYYGASSKDEYNRLLTDEKNKPERYNG--EYGHSSSEFTVNFKDKLTGE 350
Db 203 F-EGLSAAGDKSGALSALAEGLV-----RQAEASSGHTDFGWTSEFVDFSDTKTGT 257
Qy 351 LFSN---LQDSRKGNTKTKRYDIDANIYNNRFRGSATASDKAEASKTKHPFTSDAKNSL 407
Db 258 LYRNNRITQNNSENKQIKTRYTIQATLHGNRFGKALADKG-ATNGSHPFISDS-DSL 315
Qy 408 EGGYFGNAEELACKFTINDNKLFGVFGAKRESK-----AGEKTEAILDAYALGTGPNK 461
Db 316 EGGYFGPKGELAGKFLSNNDKNVAAPVFGAKQKQKOGNAAGPATE-VIDAYRI----- 368
Qy 462 NATTFPTPKQLDNFGNAKLLVLSGTVIDLVPVTGVTKDVNEFTKNKPDGATNKAGETLM 521
Db 369 ---TGEEFKKEQIDUSFGDVKKLLVDGVLSLLP-----SEGNKAAEQHE 409
Qy 522 VNDKSVKTYGYGRNFYLYKFGELSVGTSNSVFLQGERATATGKAVPTKTGAKYLGWV 581
Db 410 I-EQNGVKATVCCSNLDYMSFGKLSKENKDDMFLOQVTRTPVS-DVAARTEANAKYRGTWY 467
Qy 582 GYI---TKDSSKSFNEAQDVADFDIDPEKSVKGLTKTKDRQDPVFNITGDIAAGWTG 638
Db 468 GYIANGTSWSGEASNGGNNRAEFDVDFSTKISGTLTAKDRTPAFPTITAMIKDNGFSG 527
Qy 639 KASTTKADAGYKIDSSSTGKSIKIVK-DAEYTGFGYFGPNANEMGSGPTH-----NTDSDK 692
Db 528 VAKTGE---NGFALDPQNTGNSHYTHIEATVSGFGYKNALEMGGSFPGNAPEGKQEK 584
Qy 693 ASVVFGTKRQBEVK 706
Db 585 ASVVFGAKRQLVQ 598

RESULT 34
US-08-637-654-97
; Sequence 97, Application US/08637654
; Patent No. 6358727
; GENERAL INFORMATION:
; APPLICANT: Loomore, Sheena M
; APPLICANT: Harkness, Robin E
; APPLICANT: Schryvers, Anthony B

```

```

; APPLICANT: Chong, Pele
; APPLICANT: Gray-Owen, Scott
; APPLICANT: Yang, Yan-Ping
; APPLICANT: Murdin, Andrew D
; APPLICANT: Klein, Michel H
; TITLE OF INVENTION: HAEMOPHILUS TRANSFERRIN RECEPTOR GENES
; NUMBER OF SEQUENCES: 147
; CORRESPONDENCE ADDRESS:
; ADDRESS: 6th Floor, 330 University Avenue
; CITY: Toronto
; STATE: Ontario
; COUNTRY: Canada
; ZIP: M5G 1R7
; COMPUTER READABLE FORM:
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patentin Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/637,654
; FILING DATE: 05-AUG-1996
; CLASSIFICATION: 435
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: PCT/CA94/00616
; FILING DATE:
; ATTORNEY/AGENT INFORMATION:
; NAME: Stewart, Michael I
; REGISTRATION NUMBER: 24,973
; REFERENCE/DOCKET NUMBER: 1038-595
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (416) 595-1155
; TELEFAX: (416) 595-1163
; INFORMATION FOR SEQ ID NO: 97:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 598 amino acids
; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear
US-08-637-654-97

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Query Match      22.6%; Score 833.5; DB 3; Length 598;
Best Local Similarity 34.7%; Pred. No. 1e-48;
Matches 234; Conservative 98; Mismatches 213; Indels 129; Gaps 28;

Qy 63 GGTNSGTGSANT-----PEPKYKDVPTDENKDKRVSGIQBPAMGYGMALSKMNLH----- 112
Db 24 GGSFDDLSVETVQDMHSPKPYEDEKSPQSDVSENSGAAYGFAVKLPRNAHFNPKY 83
Qy 113 KQDPTPLDEKDIITLDGKKQVAKGEKSPLPFSLDVENKLLDGYIAKMEADKNAIGDRIK 172
Db 84 KEKHPLGSM-----WKKLQGE--PNSFS-----E 108
Qy 173 KDNKDKSLSAEALAKQIKEDVRKSHFQVQLSSLNKIFHSNDGTTKATTRDLOVYDGY 232
Db 109 RDELEKRGSELTESKWEDQ-----SRVV-----GYTNFT-----YVRSY 146
Qy 233 YLVNDGNYLTKTDELNNLGPVGVYNGTTTAKELPTQDAVKYKGHWDPMTDVAKQNR 292
Db 147 VYLNKN-IDIK-NNIVLFGPDGGLYKGEKPELPS-EKITTYKGWIDVTD-AMEKQR 202
Qy 293 FSEVKENLQAGRYYGASSKDEYNRLLTDEKNKPERYNG--EYGHSSSEFTVNFKDKLTGE 350
Db 203 F-EGLSAAGDKSGALSALAEGLV-----RQAEASSGHTDFGWTSEFVDFSDTKTGT 257
Qy 351 LFSN---LQDSRKGNTKTKRYDIDANIYNNRFRGSATASDKAEASKTKHPFTSDAKNSL 407
Db 258 LYRNNRITQNNSENKQIKTRYTIQATLHGNRFGKALADKG-ATNGSHPFISDS-DSL 315
Qy 408 EGGYFGNAEELACKFTINDNKLFGVFGAKRESK-----AGEKTEAILDAYALGTGPNK 461
Db 316 EGGYFGPKGELAGKFLSNNDKNVAAPVFGAKQKQKOGNAAGPATE-VIDAYRI----- 368

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QY 462 NATTTPTTKKOLDNFGNAKLVLGSTVIDLVPVTGTVKDVNEFTKKNKPSDTSATNKAGETLM 521
DB 369 ---TGEEFKKEQIDSGVDGKLVLDGVELSLLP-----SEGNKAAPQHE 409
QY 522 VNDKVSVKTYGYGRNFEYLKFGELSVGTSNSVFLQERTATTGEXAVPTKGTAKYLGWV 581
DB 410 I-EQGVKATVCCSNLDYMSFGKLSKENKDDMLQGVTPVS-DVAARTEANAKYRGTWY 467
QY 582 GYI---TGKDSKSFNEAQDVADFDIDPEKSKVKGKLTTKDQDPVFNITGDIAGNGWTG 638
DB 468 GYIANGTSWSGEASNOEGGNRAEFVDVFTSKISGTLTAKDRTSPAFITAMIKDNGFSG 527
QY 639 KASTTKADAGGYKIDSSSTGKSIVIK-DAEVTGGFYGNANEMGGSFTH-----NTDSDK 692
DB 528 VAKTGE---NGFALDPQNTGNSHYTHIEATVSGGFYGNALIEMGSPFPGNAPGKQEK 584
QY 693 ASVVFGRQREVK 706
DB 585 ASVVFGRQRLVQ 598

RESULT 35

US-08-649-518-97
; Sequence 97, Application US/08649518
; Patent No. 6361779
; GENERAL INFORMATION:
; APPLICANT: Loomsore, Sheena
; APPLICANT: Harkness, Robin
; APPLICANT: Schryvers, Anthony
; APPLICANT: Chong, Pele
; APPLICANT: Gray-Owen, Scott
; APPLICANT: Yang, Yan-Ping
; APPLICANT: Murdin, Andrew
; APPLICANT: Klein, Michel
; TITLE OF INVENTION: Transferrin Receptor Genes
; NUMBER OF SEQUENCES: 160
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Sim & McBurney
; STREET: 6th Floor, 330 University Avenue
; CITY: Toronto
; STATE: Ontario
; COUNTRY: Canada
; ZIP: M5G 1R7
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patent In Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/649,518
; FILING DATE: 17-MAY-1996
; CLASSIFICATION: 536
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/337,483
; FILING DATE: 08-NOV-1994
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/483,577
; FILING DATE: 07-JUN-1995
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/175,116
; FILING DATE: 29-DEC-1993
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/148,968
; FILING DATE: 08-NOV-1993
; ATTORNEY/AGENT INFORMATION:
; NAME: Stewart, Michael I.
; REGISTRATION NUMBER: 24,973
; REFERENCE/DOCKET NUMBER: 1038-608
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (416) 595-1155
; TELEFAX: (416) 595-1163
; INFORMATION FOR SEQ ID NO: 97:
; SEQUENCE CHARACTERISTICS:

; LENGTH: 598 amino acids
; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; US-08-649-518-97

Query Match 22.6%; Score 833.5; DB 3; Length 598;

Best Local Similarity 34.7%; Pred. No. 1e-48; Mismatches 213; Indels 129; Gaps 28;

Matches 234; Conservative 98; Mismatches 213; Indels 129; Gaps 28;

QY 63 GGTNSGTGSANT-----PEPKYKDVPTDENKDKDEVSIGIQEIPAMGYGMALSKNHL----- 112

DB 24 GGSFDLDSVETQDMHSPKPYEDEKSPQSDVSENSGAAYGPAVKLPNRNAHFNPXY 83

QY 113 KQDTPDDEKDIITLDGKKQVAKGKSPPLPSLDVENKLLDGYIAKMEADKNAIGDIRIK 172

DB 84 KEKHPGLSMD-----WKKLQGE--PNSFS-----E 108

QY 173 KDNKDKLSKAEAKQIKEDVRSHEFOOVLSSLKNKIFHSNDGTTKATTRDLQVVDYGY 232

DB 109 RDELEKRGSSSELIESKWEDQ-----SRVV-----GYTNT-----YVRSGY 146

QY 233 YLVNDGNYLTVDLWNLGPGVGVYNGTITTAKELPQTQDAVKYKGHWDFMTDVAKQNR 292

DB 147 VYLNKN-IDIK-NNIVLFGPDGYLYYKGEKPSKELPS-EKITKGTWYVD-AMEKOR 202

QY 293 FSEVKENLQAGRYYGASSKDBYNNLLTDEKKNKPERYNG--EYHSSEPTVNFKKKLJGE 350

DB 203 F-EGLGSAAGDKSGALSALBEGVL---RQAEASSGHTDFGMTSEPEVDFSDTKIKGT 257

QY 351 LFSN---LQDSRKGNTTKREYDIDANIYGNRFRGSATASDKABASKTKHPTSDAKNSL 407

DB 258 LYRNNRITQNNSENKQIKTRYITQATLHGNRFGKALAADKG-ATNGSHPFISDS-DSL 315

QY 408 EGGYVGPNAELAGKFLTNNDKLFVFGAKRESK-----AGEKTEALIDAYALGTENKN 461

DB 316 EGGYVGPKEGELAGKFLSNDKNVAVFGAKQKDKDGENAAGPATE-VIDAYRI----- 368

QY 462 NATTTPTTKKOLDNFGNAKLVLGSTVIDLVPVTGTVKDVNEFTKKNKPSDTSATNKAGETLM 521

DB 369 ---TGEEFKKEQIDSGVDGKLVLDGVELSLLP-----SEGNKAAPQHE 409

QY 522 VNDKVSVKTYGYGRNFEYLKFGELSVGTSNSVFLQERTATTGEXAVPTKGTAKYLGWV 581

DB 410 I-EQGVKATVCCSNLDYMSFGKLSKENKDDMLQGVTPVS-DVAARTEANAKYRGTWY 467

QY 582 GYI---TGKDSKSFNEAQDVADFDIDPEKSKVKGKLTTKDQDPVFNITGDIAGNGWTG 638

DB 468 GYIANGTSWSGEASNOEGGNRAEFVDVFTSKISGTLTAKDRTSPAFITAMIKDNGFSG 527

QY 639 KASTTKADAGGYKIDSSSTGKSIVIK-DAEVTGGFYGNANEMGGSFTH-----NTDSDK 692

DB 528 VAKTGE---NGFALDPQNTGNSHYTHIEATVSGGFYGNALIEMGSPFPGNAPGKQEK 584

QY 693 ASVVFGRQREVK 706

DB 585 ASVVFGRQRLVQ 598

RESULT 36

US-07-961-522-4
; Sequence 4, Application US/07961522
; Patent No. 5417971
; GENERAL INFORMATION:
; APPLICANT: POTTER, ANDREW A.
; APPLICANT: GERLACH, GERALD F.
; APPLICANT: WILLSON, PHILIP J.
; APPLICANT: ROSSI-CAMPOS, AMALIA
; TITLE OF INVENTION: VACCINES FOR ACTINOBACILLUS
; TITLE OF INVENTION: PLEUROPEUMONIAE
; NUMBER OF SEQUENCES: 9
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: ROBERTA L. ROBINS

```
STREET: 635 BRYANT STREET
CITY: PALO ALTO
STATE: CALIFORNIA
COUNTRY: UNITED STATES OF AMERICA
ZIP: 94301
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/07/961.522
FILING DATE: 19921015
CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: ROBINS, ROBERTA L.
REGISTRATION NUMBER: 33,208
REFERENCE/DOCKET NUMBER: 9000-0015.20
TELEPHONE: (415) 617-8999
TELEFAX: (415) 327-3231
INFORMATION FOR SEQ ID NO: 4:
SEQUENCE CHARACTERISTICS:
LENGTH: 593 amino acids
TYPE: AMINO ACID
STRANDEDNESS: single
TOPOLOGY: linear
MOLECULE TYPE: peptide
US-07-961-522-4

Query Match      22.6%; Score 832.5; DB 1; Length 593;
Best Local Similarity 31.1%; Pred. No. 1.2e-48;
Matches 228; Conservative 101; Mismatches 232; Indels 171; Gaps 24;

Qy 3 HIPLTTLCLVAISAVLLTACGSGSGSNPPAPTPPINASGSGNTGNTGNAGGTDNTANAGNT 62
Db 2 HFKLNPALAPTSLFLVACSGGKSFLEDRV-PNQ-----ETQLLRNKAPKTETGE--KENERVVELSE 36
Qy 63 GGTNSGSGSANTPEPKYKDVPTDENKDKDEVSIGIQEPAMGYCMALSKMNLHKQDTPLEK 122
Db 37 -----TAKAEKATTSYQDEETKKTKEELDKLMEPALGY----- 70
Qy 123 DIITLDGKKQVAKGKESPLPFSLDVENKLLDGYIAKNEADKNAIGRIKDKNDKSLK 182
Db 71 -----ETQLLRNKAPKTETGE--KENERVVELSE 98
Qy 183 AELAKQIKEDVRKSHFEQQVL--SSLKNKI FHSNDGTTKATTRDLOYDYGYLVNDGNYL 241
Db 99 DKITKLYQESVEIIPHLDELNGKTTSDVYHSHDSKRLDKNRDLKYVRSYG--VYDGSFN 156
Qy 242 TVKTDE---LWNLPVGVGYNGTTTAKELPTQDAVKYKGHPMTDVAKQRNRFSEVK 297
Db 157 EIRNDSGFHVKQIGIDGYVYLGVTFSKELPKGVKISYKGTWDFVSNINLER-----EID 212
Qy 298 --ENLQAGRYGASSKDEYNRLTDEKNKPERYNGEYG-----HSSEFTVNFKDKKL 347
Db 213 GFDTSGDGKNVSAIS-----ITETVNRDHKVGKLGDNVEKGVASHSSEPAVDFDNKKL 265
Qy 348 TGEIPLSNLQDSRKGNVTTKRYDYIDANIYGNRFRGSATASDKABASKTKGPFPTSDAKNSL 407
Db 266 TGSLYRNGYINRNKAQEVTKRYSIEADIANRFRG-----KAKAEKAGDPIFTDS-NYL 318
Qy 408 EGGYVGNABELACKFLTNDNKLGVFCABKESKAGE-KTEAILDAYALGTFNKNNTTF 466
Db 319 EGGYVGNABEAGKFFTNKSLFAVFAAKSEN--GETTTERIIDATKI-----DL 367
Qy 467 TPFTTKQLDNPFGNAKLVLGSTVIDLVPTGVTKDVBFTKNKPDASATNKAAGETILMVDKV 526
Db 368 TQFNAKELNPNFGDASVLIIDQKIDLA-----GVNFKNSKTVEINGKT 410
Qy 527 SVKTYGYGRNPEYIKFGEI-----SVGTSNSVFLQGERATATGKAVPTKGTAKYLGNNW 580
Db 411 MV-AVACCNSNLEYMKFGQLWQEGKQQVKONSLFLQGERATAT---DKMPAGGNTKYVGTW 466

581 -----VGYITGDKSSKFNEAQDVADFDIDFEKSKSVKGLTTKDRQDPVFNITGDIAG 633
467 DALVSKGTNWAERADNR---ESGYRTEFDVNFSDKKVNGKLPDKGGVNPVFTVDATING 523
Qy 634 NGWTGKASTTKADAGGYKIDS-SSTGKSIYVKAQEVTTGGFYGNANEMGSGFTHTDDSK 692
Db 524 NGFTGSAKTSDS---GPALDAGSSQHGNAVFSDIKVGNGFYGPTAGELGGQFHHSKSDNGS 580
Qy 693 ASVVFGTKROEE 704
Db 581 VGAVFAGKROIE 592

RESULT 37
US-08-217-438-4
; Sequence 4, Application US/08217438
; Patent No. 5521072
; GENERAL INFORMATION:
; APPLICANT: Potter, Andrew A.
; APPLICANT: Gerlach, Gerald F.
; APPLICANT: Willison, Philip J.
; APPLICANT: Rossi-Campos, Amalia
; TITLE OF INVENTION: ACTINOBACILLUS PLEURODNEIMONIAE
; NUMBER OF SEQUENCES: 11
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Reed & Robins
; STREET: 635 Bryant Street
; CITY: Palo Alto
; STATE: California
; COUNTRY: USA
; ZIP: 94301
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/217,438
; FILING DATE: 22-MAR-1994
; CLASSIFICATION: 435
; ATTORNEY/AGENT INFORMATION:
; NAME: Robins, Roberta L.
; REGISTRATION NUMBER: 33,208
; REFERENCE/DOCKET NUMBER: 9001-0015.01
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 415-617-8999
; TELEFAX: 415-327-3231
; TELEX:
; INFORMATION FOR SEQ ID NO: 4:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 593 amino acids
; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; US-08-217-438-4

Query Match      22.6%; Score 832.5; DB 1; Length 593;
Best Local Similarity 31.1%; Pred. No. 1.2e-48;
Matches 228; Conservative 101; Mismatches 232; Indels 171; Gaps 24;

Qy 3 HIPLTTLCLVAISAVLLTACGSGSGSNPPAPTPPINASGSGNTGNTGNAGGTDNTANAGNT 62
Db 2 HFKLNPALAPTSLFLVACSGGKSFLEDRV-PNQ-----ETQLLRNKAPKTETGE--KENERVVELSE 36
Qy 63 GGTNSGSGSANTPEPKYKDVPTDENKDKDEVSIGIQEPAMGYCMALSKMNLHKQDTPLEK 122
Db 37 -----TAKAEKATTSYQDEETKKTKEELDKLMEPALGY----- 70
Qy 123 DIITLDGKKQVAKGKESPLPFSLDVENKLLDGYIAKNEADKNAIGRIKDKNDKSLK 182
Db 71 -----ETQLLRNKAPKTETGE--KENERVVELSE 98
Qy 183 AELAKQIKEDVRKSHFEQQVL--SSLKNKI FHSNDGTTKATTRDLOYDYGYLVNDGNYL 241
Db 99 DKITKLYQESVEIIPHLDELNGKTTSDVYHSHDSKRLDKNRDLKYVRSYG--VYDGSFN 156
Qy 242 TVKTDE---LWNLPVGVGYNGTTTAKELPTQDAVKYKGHPMTDVAKQRNRFSEVK 297
Db 157 EIRNDSGFHVKQIGIDGYVYLGVTFSKELPKGVKISYKGTWDFVSNINLER-----EID 212
Qy 298 --ENLQAGRYGASSKDEYNRLTDEKNKPERYNGEYG-----HSSEFTVNFKDKKL 347
Db 213 GFDTSGDGKNVSAIS-----ITETVNRDHKVGKLGDNVEKGVASHSSEPAVDFDNKKL 265
Qy 348 TGEIPLSNLQDSRKGNVTTKRYDYIDANIYGNRFRGSATASDKABASKTKGPFPTSDAKNSL 407
Db 266 TGSLYRNGYINRNKAQEVTKRYSIEADIANRFRG-----KAKAEKAGDPIFTDS-NYL 318
Qy 408 EGGYVGNABELACKFLTNDNKLGVFCABKESKAGE-KTEAILDAYALGTFNKNNTTF 466
Db 319 EGGYVGNABEAGKFFTNKSLFAVFAAKSEN--GETTTERIIDATKI-----DL 367
Qy 467 TPFTTKQLDNPFGNAKLVLGSTVIDLVPTGVTKDVBFTKNKPDASATNKAAGETILMVDKV 526
Db 368 TQFNAKELNPNFGDASVLIIDQKIDLA-----GVNFKNSKTVEINGKT 410
Qy 527 SVKTYGYGRNPEYIKFGEI-----SVGTSNSVFLQGERATATGKAVPTKGTAKYLGNNW 580
Db 411 MV-AVACCNSNLEYMKFGQLWQEGKQQVKONSLFLQGERATAT---DKMPAGGNTKYVGTW 466
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Patent No. 5708149
GENERAL INFORMATION:
APPLICANT: Loosmore, Sheena
APPLICANT: Harkness, Robin
APPLICANT: Schryvers, Anthony
APPLICANT: Chong, Pele
APPLICANT: Gray-Owen, Scott
APPLICANT: Yang, Yan-Ping
APPLICANT: Murdin, Andrew
APPLICANT: Klein, Michel
TITLE OF INVENTION: Transferrin Receptor Genes
NUMBER OF SEQUENCES: 147
CORRESPONDENCE ADDRESS:
ADDRESSEE: Sim & McBurney
STREET: 6th Floor, 330 University Avenue
CITY: Toronto
STATE: Ontario
COUNTRY: Canada
ZIP: M5G 1R7
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/487,890A
FILING DATE: 07-JUN-1993
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/175,116
FILING DATE: 29-DEC-1993
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/148,968
FILING DATE: 08-NOV-1993
ATTORNEY/AGENT INFORMATION:
NAME: Stewart, Michael I
REGISTRATION NUMBER: 24,973
REFERENCE/DOCKET NUMBER: 1038-466 MIS:jb
TELECOMMUNICATION INFORMATION:
TELEPHONE: (416) 595-1155
TELEFAX: (416) 595-1163
INFORMATION FOR SEQ ID NO: 100:
SEQUENCE CHARACTERISTICS:
LENGTH: 593 amino acids
TYPE: amino acid
STRANDEDNESS: single
TOPOLOGY: linear
US-08-487-890A-100

Query Match 22.6%; Score 832.5; DB 1; Length 593;
Best Local Similarity 31.1%; Pred. No. 1.2e-48;
Matches 228; Conservative 101; Mismatches 232; Indels 171; Gaps 24;

Qy 3 HIPLTLCVAISAVLLTACGGSGSNPPAPTPIPNASGSGNTGNTGNAGGTDNTANAGT 62
Db 2 HFKLNPVALFTSLFLVACSGGKSFLEEDVR-FNQ----- 36
Qy 63 GGTNSGTGSANTPEPKYQDVPTDENKKDEVSIOEPANGYGMALSKNHLKQDTPLEK 122
Db 37 -----TAKAEKATTSYQDEETKTKTEELDKLMEPALGY----- 70
Qy 123 DIITLDGKKVAKGKSLPLPSLDVENKLLDGYIAKNEADKNAIGDRICKDKKSLSK 182
Db 71 -----ETQLLRNKAKPTETGE--KKNRVFVSE 98
Qy 183 AELAKQIKEDVRKGHEFOQVL-SSLKXNKIPHSNDGTTKATTRDLQYDYGYLVNDGNYL 241
Db 99 DKITKLYQESVEIIPHLDELNGKTTSDNVYHSHDSKRLDKNRDLKYVRSYG--VYDGSFN 156
Qy 242 TVKTDE-----LWNLPVGGVGYNGTTTAKELPTQDAVKYKGHWDFMTDVAQRNRFSEVK 297
Db 157 EIRNDSGHFVFKQIDGYVYLYGVTPSKLPKGVISYKGTWDFVSNINLER-----EID 212

298 --ENLAQRYGYGASSKDEYNRLTDBKNKPERYNGYG-----HSSEFTVNFKDKKL 347
213 GFDTSGDGKNVSATS-----ITETVNRDHKVGEKLGDNVEKGVVAHSSEFAVDFONKKL 265
348 TGEFLPSNLQDSRGKNTKTKRYDIDANIYGNRRGGSATASDKAEASKTKHPFTSDAKNSL 407
266 TGSLYRNGYINRNKAQEVTKRYSIEADIAGNRFRG-----KAKAEKAGDPIFTDS-NYL 318
408 EGGFYGNPAEELAGKFLTNDNKLFGVFGAKRESKAGE-KTEAILDAYALGTGFKNNATTF 466
319 EGGFYGPKAEMACKFTNNKSLFAVFAAKSEN--GETTTERIIDATKI-----DL 367
467 TPFTKKQLDNFGNAKKLVLGSTVIDLPTGVTKDVNNEFTKNKPDPSATNKAGETIMVNDKV 526
368 TQFNAXELNFGDASVLIIDGOKIDLA-----GVNFKNKSKTVEINGKT 410
527 SVTYGYGRNFEYLKFGEL-----SVGTSNSVFLQERTATTGEKAVPTKGTAKYLGW 580
411 MV-AVACCNSLEYMKFQGLWKQEGKQVKDNSLFLQERTAT--DKMPAGGNYKYVGTW 466
581 -----VGVIITGKSSKSFEADVDADFDIDPEKSVKGLTKDRQDQDPVFNITGDIAG 633
467 DALVSKGTWIAEDNRR---ESGYTEFDVNFSDKKVNGKLPDXGGVNPVFTVDATING 523
634 NGWTKASTTKADAGGYKIDS-SSTGKSIVIKDAVYTGFGYGNANEMGSGFTHTDSDSK 692
524 NGFIGSAKTSDS--GFALDAGSSQHGNVFSIDIKVNGGFGYPTAGELGGQPHHKSDNGS 580
693 ASVVFQTKQEE 704
581 VGAVFGAKRQIE 592

RESULT 40
US-08-321-978-4
Sequence 4, Application US/08321978
Patent No. 5801018
GENERAL INFORMATION:
APPLICANT: POTTER, ANDREW A.
APPLICANT: GERLACH, GERALD F.
APPLICANT: WILLSON, PHILIP J.
APPLICANT: ROSSI-CAMPOS, AMALIA
TITLE OF INVENTION: VACCINES FOR ACTINOBACILLUS
NUMBER OF SEQUENCES: 9
CORRESPONDENCE ADDRESS:
ADDRESSEE: ROBERTA L. ROBINS
STREET: 285 HAMILTON AVE, SUITE 200
CITY: PALO ALTO
STATE: CALIFORNIA
COUNTRY: UNITED STATES OF AMERICA
ZIP: 94301
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA: US/08/321,978
FILING DATE: 12-OCT-1994
CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: ROBINS, ROBERTA L.
REGISTRATION NUMBER: 33,208
REFERENCE/DOCKET NUMBER: 9001-0015.02
TELECOMMUNICATION INFORMATION:
TELEPHONE: (415) 327-3400
TELEFAX: (415) 327-3231
INFORMATION FOR SEQ ID NO: 4:
SEQUENCE CHARACTERISTICS:
LENGTH: 593 amino acids
TYPE: amino acid
STRANDEDNESS: single

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; TOPOLOGY: linear
; MOLECULE TYPE: peptide
US-08-321-978-4

Query Match      22.6%; Score 832.5; DB 1; Length 593;
Best Local Similarity 31.1%; Pred. No. 1.2e-48;
Matches 228; Conservative 101; Mismatches 232; Indels 171; Gaps 24;

Qy 3 HIPLTLCVAISAVLLTACGSGGSPAPPTPIPNASGSGNTGNTGAGGTDNTANAGNT 62
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Qy 2 HFKNLPYALFTSLFLVACSGGKGFDELYR-PNQ----- 36
Db | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
Qy 63 GGTNSGTGSANTPEPKYKDVPTDENKKDEVGIGIOPAMGYCMALSKMNLHKQDTPLEK 122
Db | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
Qy 37 -----TAKAEKATTSYODEETKKTKELDKLMEPALGY----- 70
Db | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
Qy 123 DIITLDGKKQVAKGKSPPLPSLDVENKLLDGYIAKMEADNAIGRIKKNKDKSLSK 182
Db | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
Qy 71 -----ETQILRRNKAPKTETGE--KENERVVELSE 98
Db | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
Qy 183 AELAKQIKEDYRKSHFQOVL-SSLKNKI FHSNDGTTKATTRDLQYVDYGYLVNDGNYL 241
Db | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
Qy 99 DKITKLYQESVEIIPHLDELNGKTTSDNVYHSHDSKRLDKNRDLKYVRSGY--VYDGSFN 156
Db | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
Qy 242 TVKTDE---LWNLPVGVGVYNGTTAKELPTQDAVKYKGHWDFMTDVAQQRNRFSEVK 297
Db | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
Qy 157 EIRNDSGFHFVKQIDGYVYLVGTPSKELPKGVISYKGTWDFVSNINLER-----EID 212
Db | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
Qy 298 --ENLQAGRYYGASSKQBYNRLLTDEKNKPERYNGEYV-----HSSEFTVNFKDKKL 347
Db | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
Qy 213 GFDTSGDGKNVSATS-----ITETVNRDHKVGKLGDNVEKGVASHSEFAVDFDNKKL 265
Db | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
Qy 348 TGEI LFNLDQRKGNVTKRYDIDANIYGNRFRGSATASDKABASKTKHPFTSDAKNSL 407
Db | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
Qy 266 TGSLYRNGYINRNKAQEVTKRYSIEADIAGNRFRG-----KAKAEKAGDPIFTDS-NYL 318
Db | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
Qy 408 EGGFYGPNABELACKFLNDNKLFCVFGAKESKAGE-KTEAILDAYALGTFNKNNTTF 466
Db | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
Qy 319 EGGFYGPAEEMAGKFFTNKSLFAVFAAKSEN--GETTTERIIDATKI-----DL 367
Db | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
Qy 467 TPFTTKQLDNFGNAKKLVLGSLVDLPVTGVDVNEFTKNKPSATNKAGETILMVNDKV 526
Db | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
Qy 368 TQFNAKELNFGDASVLIIDGQKIDLA-----GVNPFKNSKTVEINGKT 410
Db | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
Qy 527 SVKTYGYGRNPEYLYKFGEL-----SVGTSNSVFLQERTATTGKAVPTKGTAKYLGW 580
Db | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
Qy 411 MV-AVACCSNLEYMKFGQWQEGKQKQVKDNSLFLQERTAT---DKMPAGGNYKYVGTW 466
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Qy 581 -----VGYITGKDSKSFNEAQDVADFDIDFEKSVKGLTKDRQDPVFNITGDIAG 633
Db | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
Qy 467 DALYSKGTNIAEADNNR---ESGYRTEFDYVNSDKKYNGLFDKGGVNPVFTVDATING 523
Db | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
Qy 634 NGWTGKASTTKADAGGYKIDS-SSTGKSIIVIKDAEVTGGFYGPANEMGGSFTHNTDDSK 692
Db | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
Qy 524 NGFLGSAKTSDS---GFALDAGSSQHGNAVFSDIKVNGGFGYPTAGELGGQFHHSKSDGS 580
Db | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
Qy 693 ASVVFGTKRQEE 704
Db | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
Qy 581 VGAVFGAKRQIE 592
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